Intensive Care Unit Competencies of New Nursing Graduates in Saudi Arabia, Nurse Educator and Preceptor Perspectives

A Submitted Thesis to the College of Graduate Studies and Research in Partial Fulfillment of the Requirements for the Degree of Master of Nursing in the College of Nursing

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Abstract

The purpose of this study was to describe the competencies needed by nursing intern students as identified by their preceptors and nurse educators, who choose to work as registered nurses in intensive care units in Saudi Arabia. The research questions this study investigated were 1) what do nurse preceptors and nurse educators believe are the competencies for new graduates to allow them to work safely in an intensive care unit in Saudi Arabia, 2) what are the competencies they should possess at the end of their internships. 3) Is there a difference between nurse educators and preceptors in the perception of required or expected competencies of the nursing role in the Intensive Care Unit (ICU)?

Through the Interpretive Description methodology, data were collected through interviews, the guide for which was developed based on the Canadian Association of Critical Care Nurses standards for critical care nursing practice. The data were analyzed to identify common themes. Themes for intensive care unit competencies included: 1) needed skill competencies; 2) development of knowledge application competencies; and 3) strategies for quality improvement. A notable aspect of this study was the finding that Saudi Arabia, there was agreement among participants that nursing intern students were not prepared to work in ICU immediately after their internship year. Building on participants' responses, nursing intern students may acquire satisfactory preparation during their internship through continuous evaluation, consistent guidance, extended time period, and orientation. Consequently, it represents a significant contribution to enriching the nursing intern students' internship outcomes as well as the literature in the context of Saudi Arabia and in advancing the nursing workforce in Intensive Care Units in Saudi Arabia.

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My genuine appreciation goes to my friends and colleagues in Saudi Arabia in both King Abdulaziz University (KAU) and King Abdulaziz University Hospital (KAUH). They have tolerated and assisted in all my requests throughout my data collection process with open hearts.

Dedications

I affectionately dedicate this thesis to my beloved mother Fatimah who passed away four months before this thesis was completed, warmhearted father Abdulaziz, and my three soul-mates sisters Heba, Jawaher, and Lateefah and my one and only great brother Mohammed for their belief in me. Their great support, patience and international calls during my journey in Canada were priceless and gave the push I need to accomplish what I came for.

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Chapter 1

Introduction and Background

In 1958, nursing education in Saudi Arabia started with a one year program through the establishment of the first Health Institute Program in a collaboration between the Ministry of Health and the World Health Organization (WHO) in Riyadh (Aldossary, White, & Barriball, 2008; Tumulty, 2001). By 1990, nursing education continued to develop as the Ministry of Health increased the length of that program to three years (Aldossary et al., 2008; Miller-Rosser, Chapmau, & Francis, 2006). In 1976, a program for the nursing baccalaureate degree was established in King Saud University in Riyadh, which was followed by a new master of nursing science program in 1987. Later, other baccalaureate of nursing programs were established in the cities of Jeddah and Dammam, which were limited to female students who had completed elementary and secondary education (Berhie, 1991; Tumulty, 2001). The length of the baccalaureate program is four years, which is followed by a year of internship rotation (Alahmadi, 2012).

The nursing workforce in Saudi Arabia continues to depend on expatriates from India and the Philippines, even though the nursing workforce in Saudi Arabia has changed positively in the last ten years. Between 1999 and 2008, practicing nurses with Saudi citizenship increased from 9% to approximately 20% of the multi-nationality nurse workforce (Aldossary et al., 2008; Maben, Al-Thowini, West, & Rafferty, 2010; Marrone, 1999). This low rate of increase in the percentage of Saudis in the nursing workforce may be related to cultural or traditional reasons, or competency reasons. Cultural or traditional reasons include the fact that Saudi Arabia is a

conservative country. As a nurse, a daughter will be working in a place where she will be surrounded by males not of her family; therefore families are reluctant to allow their daughters to enter nursing schools (Maben, et al., 2010; Tumulty, 2001). In addition, the nature of the nursing work profession includes working night shifts, which again is not acceptable to many Saudi Arabian families (Okasha & Ziady, 2001). A literature review revealed that women in Saudi Arabia have a unique situation because of their gender inequality, which is evidenced by their silence in, and absence from, public life (Hamdan, 2005).

Generally, new nursing graduates who are entering the workforce face a dilemma, in that they do not have the experience or competencies that allow them to confidently navigate their knowledge into practice (Duchscher, 2008; Ellerton & Gregor, 2003). Throughout the past decades, in many countries, the discipline of nursing has accepted the fact that there is a gap between nursing education and clinical practice (Burns & Poster, 2008; Gallagher, 2004; Landers, 2000). This gap reveals the dissonance between the ideal nursing knowledge and skills that nursing students possess to safely complete care under their instructor's supervision in an academic setting, and those skills needed to complete their nursing care independently as registered nurses in a clinical setting (Burns & Poster, 2008).

1.1 Statement of the Problem

In the Middle East, there is no clear role expectation of registered nurses in practice (Mrayyan & Acron, 2004). This situation may be related to factors such as the lack of clear job description about nurses' roles and responsibilities, lack of a national licensing organization, and lack of standards for practice (Mrayyan & Acorn, 2004; Shuriquie, While, & Fitzpatrick, 2008).

Regulations for licensure by the Saudi Commission for Health Specialists (2011) in Saudi Arabia were adopted in 2008. The licensure classification was applied to all health workers, and assessed through checking their graduation certificates, training, experience, and qualifications. Even though nursing still does not have a regulated examination to qualify for licensure, it is a beginning step towards a regulated nursing profession in Saudi Arabia.

The nursing college in King Abdulaziz University (KAU) accepts only female students. Students who graduate from the Baccalaureate of Science in Nursing (BSN) from King Abdulaziz University in Jeddah may not meet the expectations of the clinical practice setting because the KAU internship program lacks the use of any national or international standards. The nursing curriculum of the nursing department in KAU consists of a four-year program as depicted in Table (1). All courses mentioned are theory courses and some have a lab to practice skills. Students graduate after coursework is complete. In addition, students will start their clinical visitations, which reflect observatory clinical experiences in their second term of second year and they continue with that until their fourth year (Alahmadi, 2012).

Table 1.1 Curriculum of Nursing Department

1st year	• English Language • Biology • Chemistry • Physics
2nd year/ 1st term	• Basic concepts of professional nursing • Psychology for nursing • Anatomy • Physiology • Biochemistry • Foundations of professional nursing (I)
2nd year/ 2nd term	• Microbiology & Para cytology • Pathology • Nutrition • Development throughout life span • Foundations of professional nursing (II) • Sociology nursing
3rd year/ 1st term	• Pharmacology (I) • Maternity nursing • Nursing care for adults (I)
3rd year/ 2nd term	• Pharmacology (II) • Nursing care for adults (II) • Child health nursing • Nursing informatics
4th year/ 1st term	• Care of older adults • Psychiatric/ mental health nursing • Community health nursing • Applied biostatistics
4th year/ 2nd term	• Nursing leadership/ management • Critical care nursing • Research process & evidence-based nursing • Elective (principle of education for nurses, counseling, epidemiology, nursing theory, and genetics for nurses)

*This curriculum outline is that of King Abdulaziz University. It is typical of baccalaureate programs in Saudi Arabia.

Upon completion of the program, graduates will be called nursing intern students and they will spend a year of internship rotating through different units in several different hospitals. Each rotating group comprises of three nursing intern students who will spend a two-week period in each ward. Nursing intern students may focus on simple routine work in each unit such as participation in patient care and procedures such as blood culture procedure, blood transfusion monitoring, or administration of antibiotic medications. Taking into consideration that King Abdulaziz University Hospital is gendered, female patients will be separated from male patients, however, female nursing intern students will take care of male patients. These rotations mean that nursing intern students will be spending a total of one month in both adult surgical and adult medical units, when both male and female nursing units are considered. Moreover, nursing intern students will be spending a two-week period in the intensive care unit, which is not gendered and they will be staying for a total of one month in both medical and surgical pediatrics, which are non-gendered.

At the beginning of the internship year, nursing intern students will be placed in different clinical settings; therefore, some of them will start with a placement in the intensive care unit. In these clinical rotations, nursing intern students are assigned to a preceptor who is one of the staff nurses. Even with that assignment, nursing intern students may have several different preceptors due to different schedules. Nursing intern students will seek their preceptor's guidance in nursing practice throughout the day. Most preceptors will assign one of their patients to the nursing intern student who will be fully responsible for the patient's care, including administrating medications and preparing the patient for special procedures. Nursing intern students are provided with a skills checklist from the Department of Nursing Education at King Abdulaziz University Hospital, which is associated with the nursing college. The checklist should help

nursing intern students to record certain procedures in each nursing unit supervised by their preceptors such as intra-venous cannulation, positioning, and vital signs monitoring. Also, the evaluation form contains a feedback space for preceptors to fill in information about their nursing intern student's performance. Later, that checklist and evaluation of nursing intern student's performance from preceptors will be handed to the department of nursing education in the hospital. If all feedback is acceptable, each nursing intern student will be given a certificate of internship completion. That certificate allows them to proceed to licensure procedures and application for a nursing position. If the performance in a specific area is not acceptable, the nursing intern student will repeat that rotation to achieve the acceptable performance in that area.

A gap between nursing education and nursing practice is perceived by Corlett (2000), Duchscher (2008), and Landers (2000). This gap between theory and practice can be affected by the ideal theoretical skills required, theory insufficiency, and clinical practice environment changes. The ideal theoretical skills required are those skills that a nurse should have upon completion of undergraduate studies. If content is not taught in the nursing program, theory insufficiency for the practice setting might occur, resulting in stress for nursing students during their internships. Finally, the fast pace of the clinical environment changes may include changes based on policy, procedure protocols, or scheduling that further affect successful transition into clinical practice in the internship (Duchscher, 2008; Ellerton & Gregor, 2003; Landers, 2000).

1.2 Research Questions

This study investigated the following questions: 1) What do preceptors and nurse educators believe are the competencies for nursing intern students following their internship to allow them to work safely in an intensive care unit (ICU) in Saudi Arabia? 2) What are the

competencies nursing intern students should learn from their internship, and 3) Is there a difference between nurse educators and preceptors in their perceptions of required or expected competencies of the nursing role in ICUs?

1.3 Purpose of the Study

The purpose of this study was to describe the competencies needed by nursing intern students who chose to work as registered nurses in intensive care units in Saudi Arabia, as identified by their preceptors and nurse educators. These competencies would have been developed in the nursing education program and in the internship period, to enable nursing intern students to work competently in the area of intensive care. Since there were no previous studies in the literature about the competencies in the context of Saudi Arabia, this research will provide a significant description of the intensive care competencies required or expected from nursing intern students who graduated from a baccalaureate-nursing program in Saudi Arabia.

1.4 Relevance and Significance

In general, a competency is defined as the ability to demonstrate and relate the knowledge, skills, judgment, and professional ethics and values to reach the desired outcomes (Poster, Adams, Clay, Garcia, Hallman, Jackson et al., 2005). Currently, competency definitions appear to be specific and build upon the context in which they are being used (Carney & Bistline, 2008; Rusche, Besuner, Partusch, & Berning, 2001). Consequently, competency in the nursing profession is a process where staff nurses relate their knowledge and skills by demonstrating the necessary care for their patients to a professional standard (Carney & Bistline, 2008; Rusche et

al., 2001). The Intensive Care Unit is a very critical area where nurses should be competent when they perform their skills to achieve the desired outcome of safe patient care.

Currently, there is a lack of standards to provide guidance in curricula, orientation programs, and professional practice in the ICU in Jeddah. Competencies have been identified as the standard to indicate whether or not the nursing graduate is practicing at a safe level of care, as required by most hospitals (Safadi, Jaradeh, Bandak, & Froelicher, 2010). Being competent in the clinical setting is a priority in all nursing colleges (Morolong & Chabeli, 2005). Therefore, a description of competencies from both perspectives of preceptors in hospitals and nurse educators in colleges is essential for the context of Saudi Arabia. Since there is limited research in this area, this study will be significant and relevant to identify the main competencies needed by nursing graduates to safely practice in intensive care units. Moreover, the results of this study may contribute to the improvement of a competency-based internship program for nurse interns in King Abdulaziz University Hospital, as well as the education of students in their educational programs. Furthermore, exploring the competencies needed by nursing intern students in intensive care settings, from the perspective of their nurse educators and their preceptors can help nurse educators in Saudi Arabia to ensure that content specific to a course of study is appropriately addressed in their education program.

As competencies of intensive care nursing would be identified through this study, it will help administrators to develop a general statement of standards. Other study outcomes may include increasing novice nurses' self-confidence by meeting identified competencies. As their self-confidence increases, their abilities to work independently and safely in critical care areas will also increase. Also, because of these standards and better preparation of nursing intern

students, the intensive care unit workforce of Saudi nurses may increase. That increase can be associated with the clear and achievable expectations and competencies.

Chapter 2

Literature Review

The literature review search for this paper was from an electronic database search. The search included the databases, Medline and CINAHL (Cumulative Index of Nursing and Allied Health) from 1997-2013. The reason behind expanding the article search to a larger time frame was because of the limited amount of nursing literature in the area of intensive care unit competencies in the context of Saudi Arabia. I used specific keywords in the research process that consisted of "nursing education", "intensive care", and "critical care". The numbers of studies found with this combination was 208 articles. Then, I narrowed the research by using the keyword "competencies" with a result of 18 articles from the Medline database. Further, I used other keywords in the CINHAL database such as "clinical competence", "students, nursing". The result was 258 articles and when I tried to narrow the search down using "critical care" as a keyword, no matches were found. Both quantitative and qualitative studies were reviewed. The literature review revealed several themes that addressed my research questions, including perceptions of competencies, methods of improving competencies, and nursing care in the Middle East. There was a lack of literature regarding intensive care competencies in Saudi Arabia in particular, and in the Middle East in general. I used both primary and secondary resources, which were indicated in article reference lists.

2.1 Literature Search

Throughout the past decades, the discipline of nursing has accepted the fact that there is a gap between nursing education and clinical practice (Burns & Poster, 2008; Landers, 2000;

Scholes & Endacott, 2003). This gap reveals the dissonance between ideal knowledge and skills that nursing students have to obtain to safely complete nursing care under instructor's supervision in an academic setting and those skills needed to independently complete their nursing care in a clinical setting (Burns & Poster, 2008).

In general more complicated requirements of registered nurses today come with demands on nurse educators to search for new ways to facilitate the progress of learning in the clinical field and take active steps to raising the regulatory standards (Camiah, 1996; Shuriquie et al., 2008). This literature review was used to find research articles specifically about competencies of nursing intern students. From the literature, competencies are defined by many scholars and different perspectives are found on describing competencies. Therefore, I categorized the literature review thematically.

2.1.1 Perception of Competencies

Perception of competencies is the first theme that I will be addressing. Maben, Latter, and Clark (2006) conducted a study to question the ideals and values adopted by newly educated registered nurses in preregistration nursing courses. Three urban well-established colleges of nursing within higher education in the United Kingdom were the study setting. The researchers followed a longitudinal design, with 72 nursing students in their final year completing the study questionnaire after an informed consent to participate. Then, a subsample of 26 students had in-depth interviews. The researchers adopted constant comparison method to analyze the data and used negative cases to strengthen the developing theory. In Phase one, the researchers used questionnaires to demonstrate baseline values and ideals such as patient-centered holistic care and quality care. In Phase two and three, in-depth interviews were conducted to determine the

magnitude of adopted ideals and values in practice. Among the study findings researchers noted that new nurses emerged from their program with a set of strong ideals and values. There were professional and organizational factors such as receiving good support. This made a great impact on students' confidence. Strength of the study was the longitudinal data collection and the two phase findings. The author suggested that nursing programs need measures to reduce work conflicts, such as identifying qualified role models and supporting mentors to fulfill their roles (Maben et al., 2006).

Kiekkas, Karga, Poulopoulou, Karpouhts, Papadoulas, and Koutsojannis (2006) conducted another study in Greece to determine critical care nurses' perceptions about whether the use of technological equipment has a positive or negative effect on their clinical practice. The researchers followed a quantitative descriptive design. One hundred eighteen nurses completed the 14-item Likert scale questionnaire. All participants were working in a critical care unit of an academic hospital. Study findings showed that most of the participants recognized the positive effect of the technical equipment in regards to quality of patient care and clinical practice. On the other hand, participants agreed on the possibility of increased risk to patients due to mechanical or human error (Kiekkas et al., 2006). Researchers strengthened the study by creating a panel of experts in critical care to assess the content validity of their questionnaire, which was followed by a pilot study. This study reinforced the importance of undergraduate and continuing education to respond effectively to nurses' learning needs of contemporary critical care needs (Kiekkas et al., 2006).

A further study was conducted in the United Kingdom by Andrews, Brodie, Andrews, Wong, and Thomas (2005) to explore how clinical placement may impact upon nursing

graduates' preferences for employment. The researchers used a place-sensitive geographical perspective to gather data using questionnaires and semi-structured interviews, a mixed method approach through both quantitative and qualitative methods. The study took place in Buckinghamshire Chilterns University College and Thames Valley University. A sample of 687 students and graduates were recruited, excluding first year students. Aquantitative method was used through questions to produce complementary data that can be generalized and the qualitative method focus group was used to explore attitudes and experiences in greater depth (Andrews et al., 2005). Data analysis was not clearly stated; however the researchers used a scatter plot graph to show the relationship between learning environment and organizational attractiveness. The researchers concluded that the findings showed a significant impact from the clinical placement on the likelihood of students to seek work at the very same hospital.

Clark, Owen, and Tholcken (2004) were also interested in the perception of competencies. Their research, conducted in the state of Texas, aimed to measure student self-efficacy beliefs for newly learned clinical skills. Eighty students who were in their third semester and enrolled in the Case Management for Persons with Chronic Illnesses course participated in the study. Faculty conducting the research developed their own self-efficacy evaluation tool, which demonstrated internal consistency through the psychometric assessment. Researchers found that the higher the student self-efficacy, the more commitment the student showed toward the learning process and their engagement in the proposed skills. Some implications of the study are to encourage faculty to evaluate students' self-efficacy and make them feel competent. This evaluation will enable faculty to better meet their students' needs, and encourage nurse educators to find ways to measure how students are receiving and appraising course contents. Generalizing

the study result is not acceptable due to the small sample size; however conducting a similar study in Saudi Arabia could explore a new area in the education system.

King, Smith, and Glenn (2003) used a quasi-experimental design to conduct their research. The purpose of the study was to increase the awareness of the competencies that nursing graduates need in the state of Tennessee to meet the acute health care demands of patients, considering and anticipating changes in the health care system. The researchers recruited 332 participants including 122 nurses in acute health care, 117 faculty members, 82 nurse administrators, and 11 deans or program directors. A questionnaire was distributed among participants in BSN programs and acute health care agencies in Tennessee. The study revealed a significant difference regarding perceptions of the competencies that new BSN graduates need to meet the needs of health agencies. Furthermore, the differences between faculty members and acute health care nurses about the importance of entry-level competencies were significant. Researchers suggested a periodical meeting between faculty members and staff nurses to discuss work setting changes. Researchers obtained the sample from a single state, which is important as each state's government is responsible for setting standards for their specific state. Moreover, the study included a large sample and consideration of the differences found is, therefore, acceptable (King et al., 2003).

The final research study under the perceptions of competencies category is by Santiano and Daffurn (2003), which used a quasi-experimental design. The purpose was to use a questionnaire to examine the self-perceived level of competence of nurses who graduated from a special intensive care nursing program in Australia. Participants were 69 graduates of the Graduate Certificate course in Intensive Care Nursing from 1991 to1997. The study revealed that

the graduates' perceived level of competence was enhanced after the special program and their career path was positively influenced. The implications of the study include creating a stimulating environment for students through interactive teaching, and defining the differences between competence and performance to students.

2.1.2 Methods of Improving Competencies

The following articles are included based on their methods of improving competencies among new nurses. Hodges, Troyan, and Keeley (2010) used a grounded theory design to explain how acute care nurses with baccalaureate degrees adapt to, negotiate, and understand changes and challenges in clinical settings. The research took place in the United States. A sample size of 19 participants who all had a direct patient care role was obtained; data were obtained through open-ended interviews that were audiotaped and transcribed. The study's main findings included building professional resilience, verifying one's place in the clinical settings, and optimizing the environment to reach one's competence. Limitations noted that researchers focused solely on the urban medical centers. The inclusion of rural areas may have produced different findings. Generalizing study findings will not be applicable without further testing in different settings (Hodges et al., 2010).

Blum, Borglund, and Parcells (2010) were concerned about providing a comparison of lab and high technology methods on clinical skills and student self-confidence in the state of Florida. A quasi-experimental design was adopted and 53 students participated. Participants (16 participated in a control group and 37 in an experimental group) were asked to independently complete the Lasater Clinical Judgment Rubric (LCJR) after their midterm and final term assessments, thus reflecting their self-confidence. Noticing, Interpreting, Reflecting, and

Responding are the subscales of the Lasater rubric, which was completed using a Likert type scale type. Study findings noted that faculty has the tendency to include high technological teaching methods hoping to appeal to the current generation. Traditional laboratory methods were a valid teaching technique in supplying students with self-confidence and clinical competencies. However, the researchers did not relate high clinical competence to the traditional laboratory methods (Blum et al., 2010).

An additional study by Ivarsson and Nilsson (2009) described the challenges of the teaching role for nursing students and how they are prepared to use it in practice through descriptive design to conduct the study (Ivarsson & Nilsson, 2009). The study took place in Lund University Hospital in Sewed after obtaining the ethical approval for human research by the Swedish Research Council. The total study sample was ten participants, including seven females and three males. The data were collected by semi-structured interviews. The major findings of the study were in relation to theory application and the application of the course content in practice, difficulties delivering information to patients and relatives, and the effect of teaching tools while giving information. The research study indicated a need to refine and adjust teaching methods in the educational program. The authors suggested conducting the same study in another setting that may lead to different outcomes.

A different study by Romyn, Linton, Giblin, Hendrickson, Limacher, Murray et al., (2009) using a descriptive design, aimed to gain deeper understanding about successful transitions of new graduate nurses. The study utilizing focus groups, took place in eight health regions in the Province of Alberta. Each focus group involved fourteen new graduates participating with 133 nurse managers, staff nurses, and nurse educators through the eight

regions. The ethical approval for this study was obtained from all health regions in Alberta along with written consent from all participants. The data was collected through 15 focus groups using open-ended questions and interviews were recorded. Data were reviewed in detail with repeat examination to identify appropriate data themes; practice readiness, hands-on experience, meeting urgent needs, importance of mentoring, and characteristics of new graduates. The researchers did not follow a specific framework, however; the study addressed the issue in Alberta and suggestions were made, such as developing a provincial strategy to foster new nurses' successful transition, develop partnerships between educational programs, and generate official mentorship programs.

Another study that looked at improving competencies was conducted in the state of Nebraska, aimed to test the effect of clinical content and structured classrooms in a relation to senior-level nursing students' understanding of patient safety and quality of health care provided (Miller & LaFramboise, 2009). Sixty-five baccalaureate students in their senior level filled out the study tool, which was developed by study researchers and called the Student's Perceptions of Safety and Quality Knowledge, Skills, and Attitude Questionnaire. Students were divided into three groups: one control group which was on one campus, and two intervention groups on another campus, to avoid cross contamination. Study findings included positive student perceptions regarding their competencies of safety and quality care. Students who engaged using both clinical setting and classrooms develop greater in-depth understanding about safety, quality care concepts, and attitudes (Miller & LaFramboise, 2009).

Duchscher (2008) published a study that aimed to build and establish aspects about new nursing graduates' transition experiences. The researcher used Kramer's transition stages in two

major Canadian cities, including fourteen new graduates from the same undergraduate nursing program. The researcher adopted a grounded theory approach. Data collection process started with demographic surveys followed by six face-to-face interviews at 1, 3, 6, 9, 12, and 18 months. The three major findings of the study were summarized as: "doing what nurses should do" at the beginning, "being what nurses should be" at the middle of the experience, and "knowing what nurses should know" at the end of the transition process. The research had strength of prolonged study to assess all aspects of transition in new nurses.

Further, a study by Hynes, Pinto, Fortier, and Bennett (2007) aimed to introduce a standardized learning and training for new nurses who seek to work in adult intensive care units in the province of Ontario. The researchers used a survey to collect their data, seeking information about standards that already exist and the current training programs. Sixty-eight intensive care units from Ontario responded to the survey. The data revealed that 85% of Ontario's intensive care units do have written standards of practices, most of them indicating the use of the published standards of the Canadian Association of Critical Care Nurses (CACCN). Further, in-house programs were used widely in training new nurses for critical care. Study strength is that they integrated Ontario's general nursing competencies with the national critical care nurses' association.

Fisher, Marshal, and Kendrick (2005) conducted a study using as comparative description design to determine the construct validity of the competency standards of the Australian College of Critical Care Nurses (ACCCN). Researchers examined the relationship between competencies, elements, and domains of competency standards of the ACCCN. They used a systemic sampling method with a response of 532 completed questionnaires. Exploratory and confirmatory factor

analysis was used in their study. The study revealed that there are some concerns about the validity of the ACCCN competency standards (Fisher et al., 2005). The researchers' decision to test the construct validity of the ACCCN competency standard is considered strength in the study.

Last but not least, is a report on a study conducted by Philpin (1999). Philpin aimed to explore different aspects of changes in occupational socialization of nurses after the introduction of Project 2000, using a grounded theory design. The study took place in three Welsh Hospitals after recruiting 18 qualified nurses working in a variety of departments. Data were collected using semi-structured interviews tape-recorded and transcribed (Philpin, 1999). Constant comparative method was used to analyze data. The researcher found that novice nurses' socialization processes are affected by the nature of their workload. Sample size was a study limitation and prevented any solid conclusions. Further research to explore occupational socialization is needed taking into consideration the nature of the workload. This study can help in future research by implementing the same project to engage novice nurses in an occupational socialization, which may increase the applicants to ICU in Saudi Arabia.

2.1.3 Identifying Competencies

Meretoja and Koponen (2012) aimed to develop a model for clinical settings to compare nurses' actual and optimal competencies in Finland. Researchers recruited a purposive sample of 24 multidisciplinary experts who work in preoperative care and used a mixed method descriptive design to collect data. The instrument 73-items Nurse Competence Scale (NCS) was used to specify nurses' actual competencies. Qualitative data were analyzed by deductive content analysis and quantitative data were analyzed using descriptive statistics. Study results found a

significant consensus among participants that optimal competence level was higher than self-reported actual competence, which can identify future challenges. Study strength was developing a three-step model to facilitate identifying future educational challenges (Meretoja & Koponen, 2012). The sample size of the study prevented generalizability of the findings.

Piscotty, Grobbel, and Tzeng (2011) conducted a study to determine if a student-led simulation teaching approach is effective to increase certain knowledge and competencies in the state of Michigan. Researchers used a quasi-experimental design with a convenience sample of 132 students. Two instruments were developed to collect data. One was an 18-statement inventory to measure students' self-rated competencies. The other one was a test of 36 multiple choice and True or False questions to test knowledge, attitude, and skills of students. Data were analyzed by paired-samples t tests. Study findings supported the hypothesis that a student-led simulation teaching approach was an effective way to increase and improve self-rated safety and quality competencies. However, the teaching approach intervention was not effective in increasing students' knowledge and skills on the post-test. Study strength was the use of two instruments to collect data to pre-test and post-test the student-led simulation experimental approach.

Another study that identified competencies was by Levett-Jones, Gersbach, Arthur, and Roche (2010) in Australia. The aim was to describe and evaluate the Structured Observation and Assessment of Practice (SOAP), which is a model used to assess the clinical competence of undergraduate nursing students. A mixed methods design was adopted in collecting data via an online evaluation form. Since the model was first introduced, 1031 students were assessed. The Statistical Package for the Social Sciences (SPSS) was used to analyze the surveys. Study results

support the principle that nursing students need to be exposed to complex clinical contexts to assure quality of clinical assessment. Qualitative data supported the positive impact of the SOAP. The mixed methods design is a strength as each finding supports the other.

A study by Porte-Gendron, Simpson, Carlson, and Van de Kamp (1997) was conducted to validate a beginning-level skill competencies list generated by the researcher and was validated through a panel of experts. Also, researchers were aiming to compare perceptions of nurse educators and nurse managers of critical care regarding the beginning-level skill competencies list by using a questionnaire that includes 105 clinical skills competencies. The study was conducted in Seattle, USA with participation of 41 nurse educators and 41 nurse managers. An agreement was found between participants in 81 competencies that led to support the beginning-level competencies list for new nurses. Study strength was the questionnaire critique from a panel of experts of nurses across the United States to update it to current trends and practice.

2.1.4 Nursing Care in the Middle East

A study by Shuriquie et al. (2008) examined Jordanian nurses' perceptions regarding their role in the clinical setting. The researchers used a cross-sectional design to conduct the study after they recruited their sample using quota sampling. They used a questionnaire survey with a total of 348 staff nurses from medical-surgical units in three different sectors of healthcare in Jordan. Study results included the expectations of registered nurses to complete the majority of nursing care actions, the limitation of the practical nurse role to the professional scope of nursing care, and nursing actions that needed interdisciplinary communication and higher levels of intellectual and emotional efforts that were only credited to registered nurses (Shuriquie et al., 2008). The study showed the significant role of staff nurses in Jordan.

An additional study by Sharif and Masoumi (2005) investigated nursing students' clinical practice experiences. A qualitative method was used to conduct the study at the Shiraz University of Medical Sciences, Iran. Ninety students were recruited, 30 from 2nd year, 30 from 3rd year, and 30 from 4th year. Participants were divided into 9 focus groups of ten students. Data analysis followed three levels of coding to examine data line by line, compare coded data, and describe the common themes. Study findings showed initial clinical anxiety, a theory practice gap, the need for clinical supervision, and professional role transition (Sharif & Masoumi, 2005).

2.2 Synthesis of Literature

Throughout the literature review process, there was a lack in identifying the critical care competencies needed by nursing intern students. The main themes identified through reviewed literature included the perceptions of competencies from the perspective of students, nursing staff, nurse managers, and nurse educators, methods of improving competencies, identifying competencies, and nursing in the Middle East. The literature from the Middle East concerning intensive care unit was lacking.

Nursing literature of the Middle East lacked the application of any international standards in the intensive care settings and/or the development of national standards. Some studies were validated existing competencies or standards to figure out if those validated competencies and standards fit in the current nursing practice. Other studies explored the stages of transition that new registered nurses in the practice went through and suggestions for better outcome were recommended. Further studies compared between the traditional teaching approach and the high technology approach, which concluded that the traditional teaching approach was a valid teaching method as followed in Saudi Arabia. Additional studies looked at the clinical placement

of new nurses, measuring self-efficacy of students, challenges students faced during their teaching role, and standardizing learning and training for new nurses. These studies helped narrow the selection of the research topic and specified the criteria of inclusion of nurse educators and preceptors in the study.

Saudi Arabia does not have standards of practice for ICUs. Thus, the standards for critical care nursing practice developed by the Canadian Association of Critical Care Nurses were used as the basis for the interview guide (Appendix B). This document was originally released in 1992, then revised three times in the following years 1997, 2004, and 2009. The fourth edition of the CACCN (2009) document was utilized to develop the interview guide of this study. Ten members of the Canadian Association of Critical Care Nurses developed the document; a few of them were on the board of directors of the association (CACCN, 2009).

The standards of clinical practice are for nurses who would work in critical care settings, which includes intensive care unit. The structure used in developing the Canadian standard was incorporating different competency statements that combine different actions. Each statement includes at least five competencies. This document was utilized in this study as it was designed to bring fundamental resources to the profession of nursing, which included nurse educators, direct nursing care practitioners, and administrators (CACCN, 2009).

According to the CACCN (2009) the first standard statement states, "Critical care nurses use advanced skills and specialized knowledge to continuously assess, monitor and manage patients for the promotion of optimal physiological balance" (p. 3). Competencies under that standard include gathering information about the patient's condition, analyzing the information to take the correct decision, integrate assessment findings to develop the plan of care, prevent

life-threatening situations, and evaluate the effectiveness of ongoing intervention (CACCN, 2009).

The second standard states, "Critical care nurses promote and facilitate optimal comfort and well-being in a highly technological environment that is often unfamiliar to patients and families" (CACCN, 2009, p. 4). Competencies of the second standard were the nurses' ability to manage the anxiety stimuli caused by the environment, preserve each individual's dignity by respecting cultural diversity, and provide information in a way to maintain realistic hope (CACCN, 2009).

The third standard states, "Critical care nurses foster mutually beneficial partnerships with patients and families based on trust, dignity, respect, communication and collaboration." (CACCN, 2009, p. 5). The intensive care unit nurse is expected to gather information to help patient and family to access appropriate resources to deal with their concerns, share honest and accurate information, advocate for the patient, and provide family with open access (CACCN, 2009).

According to the fourth standard, "When providing care in a high risk environment, critical care nurses participate in safety initiatives and adhere to best practice." (CACCN, 2009, p. 6). Nurses should anticipate after integrating data to prevent injury that may contribute to long term alteration in health, document ongoing patient care, and seek patient's and family's feedback for quality improvement (CACCN, 2009).

The fifth standard states, "When life sustaining measures are no longer beneficial, critical care nurses support patients and families through the transition from active treatment to a

peaceful death." (CACCN, 2009, p. 7). Competencies include the ability of intensive care unit nurse to encourage the discussion of advanced care with the patient and/or the family, collaborate with the family to figure available resources of support, identify candidates for organ donation, and maintain continuing communication with health team and the family about options of end life care (CACCN, 2009).

Based on the sixth standard, "The critical care nurse promotes collaborative practice in which the contribution of the patient, family and each health care provider is solicited, acknowledged and valued in a non-hierarchical manner." (CACCN, 2009, p. 8). Intensive care nurses should explain their responsibilities and roles to patients and families, effectively demonstrate interpersonal negotiation, communication, and problem solving to develop positive work place relationships, accept responsibility for their professional contribution, and consult appropriate persons to review or establish the care plan (CACCN, 2009).

The last standard states, "Critical care nurses provide leadership by fostering a critical care culture conducive to collaboration, quality improvement, safety, professional growth and responsible resource utilization." (CACCN, 2009, p. 9). Competencies included that nurses must incorporate legal, professional, and ethical standards into practice, maintain professional competency by using reflective practice, disseminate nursing knowledge and promote research, undertake a resource person, role model, and a mentor for students, and support and/or contribute to enhance the intensive care unit environment (CACCN, 2009).

I chose the Standards for Critical Care Nursing Practice (CACCN, 2009) to develop my interview guide because the document was guiding critical care nurses to plan, implement, and coordinate their care with the other health care team members to reach the psychological,

physical, cultural, and spiritual needs of the critically ill patient and their families. In the CACCN Standards of practice, the term *critical care nurse* was used in general to describe nurses in all critical care areas, which include ICUs. Therefore, throughout my thesis I use intensive care nursing and critical care nursing interchangeably. Nurses working in the intensive care unit must balance the need for technological environment with the necessity of safety, dignity, privacy, and comfort for the patient. Another reason I chose the CACCN standards was that King Abdulaziz University Hospital was the only hospital in Jeddah that obtained accreditation by Accreditation Canada; therefore, if CACCN standards of practice were adopted by KAUH, the significance of the study to many administrators who maybe in other hospitals will increase, and that will benefit the study findings' dissemination phase. The context of the Saudi Arabian nursing profession needed this international standard to be incorporated in the current nursing practice for a chance to either adopt it or develop a national one. Standards included in this document have achievable expectations in regards to nursing practice in critical care.

2.3 Conceptual Framework

The framework described the integration process between the main interrelated concepts in the study, which were the teaching/learning process as "nurse educators" and the mentoring process as "preceptors". The result from that integration process would be the development of the critical care competencies for new nursing graduates in the context and perception of Saudi Arabian ICU nurses and faculty members. The viewpoints behind the framework were exploring preceptors' and nurse educators' perceptions about critical care competencies needed by nursing intern students, finding if there were agreements or differences between both perspectives, and identifying the competencies nursing intern students should learn from their internship.


Intensive Care Competencies
Learning Process: educators and educational program
Mentoring Process: preceptors and practice settings

Chapter 3

Methodology

3.1 Overview of Methodology

This chapter presents broad description of qualitative research and more in depth explanation of the interpretive description design, which I adopted as the methodology for this study. Qualitative research methods originate from various social sciences such as sociology, anthropology, and psychology; within these disciplines developed the grounded theory, phenomenology, and ethnography, which are commonly known methods (Denzin, & Lincoln, 1994; Thorne, 2008).

Qualitative research methodology focuses on the experience and perceptions of participants. Those methodologies vary and all can be used to explore theses experiences and perceptions. Grounded theory approach reveals the unknown about human action and what drives it. However, phenomenology approach analyses human as subject through specific experience. On the other hand, ethnography approach uncovers traditional human nature (Thorne, 2008). None of these qualitative research approaches have privileges over the other (Denzin, & Lincoln, 1994).

Nurse researchers successfully borrowed those methods and fit them into their theoretical compelling contexts (Morse, & Chung, 2003; Thorne, Kirkham, & O'Flynn-Magee, 2004). These widely known and frequently used qualitative empirical methods prompted nurse researchers interested in clinical practice issues to debate the appropriateness of those methods in clinical practice and proposed possible approaches (Burns, 2009; Thorne et al., 2004).

The term qualitative description research is explained as the study of categorizing or documenting to uncover and examine certain phenomena (Sandelowski, 2000; Thorne, 2008). In qualitative description, researchers use inductive reasoning to build findings, which builds from certain responses of an inquiry and moves towards generalizations and themes (Parkins, 2008; Thorne, 2008). Moreover, the term interpretation obligates researcher to realize perspective of subjects under study. Accordingly, interpretive description approach illustrates researcher's recognition of relationships and patterns of certain phenomena (Parkins, 2008; Thorne, Reimer Kirkham, & MacDonald-Emes, 1997; Thorne, 2008).

Therefore, Interpretive Description design was developed as an alternative to the previously mentioned qualitative research approaches. Since the notion of Interpretive Description design came out, applied health sciences professionals including nurses have used it in providing a logical rationale for their decisions in qualitative research (Burns, 2009; O'Flynn-Magee, 2002; Parkins, 2008; Thorne et al., 1997). Nurse researchers have found that they need to improve their research beyond the existing qualitative methodologies to create convincing and realistic knowledge for nursing practice, which can be accomplished through Interpretive Description (Parkins, 2008; Sandelowski, 2000).

Interpretive Description design was described to require a purpose, which was derived from either an actual goal for practice and understanding of exciting empirical evidence for what known and what not known. This study design enables us to reconstruct our vision based on previous knowledge that will play a role in developing new knowledge (Sandelowski, 2000; Thorne, 2008).

Through this chapter, I will establish trustworthiness and creditability of the study to ensure rigor. Trustworthiness and credibility in qualitative research indicates undertaking certain steps throughout the study to maintain and ensure the integrity of study findings and showing thoughtful and appropriate techniques to demonstrate the reliability and integrity of the study process and the final product (Thorne, 2008). I will ensure the following aspects: stating my personal experience and stating my position as an instrument of the research, and thus to try to eliminate biases, ensuring the effectiveness of using the selected research design to ensure transferability, explaining strategies to confirm study rigor and thus, to ensure as much as possible confirmability, and lastly describing the population and sampling of the two different groups with their different perspectives for data collection ensuring triangulation to support dependability and interviewing a number of participants to achieve saturation (Caelli, Ray, & Mill, 2003; Burns, 2009; Parkins, 2008; Thorne, 2008).

I was influenced to be a nurse through my personal experience. In 1995, my only brother was born with two facial anomalies, cleft lip and palate. My mother started to get used to the hospital environment, as she had to go there at least twice a week to have my brother's nasal-gastric tube replaced by a nurse. I accompanied my mom one time because she wanted me to take a look at my brother's suffering to be encouraged to help him at home. The nurse who was taking care of my brother was very friendly. She started humming a song to my brother and started the procedure. When she finished, she played with him for a while. He appeared happy even though he cried for a while during the procedure. From that moment, I had the nursing profession in my mind to be my future plan. I entered nursing and I was fully convinced that nursing is what I wanted to do. Even though my mother was not fully supportive, she did

encourage me. Also, I had the strength from my dad who was fully supportive and enthusiastic about my goal.

I studied nursing in the King Abdulaziz University, which is located in Jeddah city, the most multicultural city in Saudi Arabia. Most people in Jeddah have accepted nursing as a profession and they encourage and support it. In Riyadh city, nursing has a poor image as most people there are conservative and do not support the nursing profession as good career choice for women. I have chosen the intensive care unit for this study specifically because of my personal experience. I worked in an ICU immediately after I graduated. As a nursing intern student, I had two weeks exposure in the ICU with a total of 8 shifts at KAUH. I did not have an accurate sense of what I would be facing as a new nurse in the ICU.

Following my nursing internship, I was employed immediately in the ICU at King Fahad Armed Forces Hospital, which was a military hospital. The hospital that I worked in had a two-week theoretical orientation program about the hospital policy and procedures, followed by three months of a supervised working period. I had limited responsibilities regarding the unit such as not participating in the code blue team outside the unit. After the supervised period, each new staff nurse is unsupervised unless she or he failed the head nurse's evaluation. I felt knowledgeable yet novice in many procedures. I experienced some tough situations in being the code nurse in the code blue team. Although I witnessed many code blue situations during my internship, I did not have the opportunity to participate in any of them. Therefore, in the real situation, I froze and started to ask the nurse supervisor in charge what to do. The help and support that I received from my colleagues and preceptor during my eight months working period, made those situations tolerable. On the other hand, I was encouraged by those situations

to apply for graduate studies abroad. My aim in pursuing a higher degree was not only personal but also to help other Saudi students who might be in my position one day. I want them to be ready and well prepared with a guideline of competencies they need to have by the end of their internship.

The interpretive description is used when new knowledge is in the developmental phase. I was responsible to report the existing literature about the phenomenon, and as I reviewed the literature, there was no literature addressing standardized practice in ICUs in Saudi Arabia. Currently, there is a slight movement toward a competency-based nursing profession in Saudi Arabia. Thus, an interpretive description design was utilized for this study and the interpretive description design was used also to analyze the data of the research.

Interpretive description methodology aims toward analyzing data to identify themes and patterns to create interpretation that will explore and update clinical understanding (Thorne et al., 2004). Further, it is a process to discover unique elements of a common topic, such as competencies in ICU settings (Thorne, 2008). The fundamental rational of the appropriateness to use interpretive description is to explore specified observations and build general patterns to describe an issue (Thorne, 2008).

3.2 Procedure

3.2.1 Settings

The study setting was one governmental university, which was King Abdulaziz University (KAU), and one governmental academic hospital, which was King Abdulaziz University Hospital (KAUH) in Jeddah city in the Kingdom of Saudi Arabia. The capacity of the intensive care unit at the King Abdulaziz University Hospital is 52 beds that are divided between medical and surgical ICU. There are 45 nurses working in the surgical ICU and 128 in the medical ICU. Nurse-patient ratio is 1:1 if the patient is dependent on a ventilator. If the patient is breathing independently, the ratio will be 1:2. A maximum of three nursing intern students will be present in this setting. Nursing intern students' relationships with their preceptors during their internship were limited to questions and observing to get familiar with the routine, handling their monitoring sheet, and limited participation in procedures. Their relationships with their nurse educators were over by the time they graduate. The department of nursing education in KAUH will be responsible for nursing intern students once they start their internship rotations.

3.2.2 Population and Sampling

The targeted population in the research study was divided into two groups. The first group was nurse educators and lecturers at King Abdulaziz University. The second group was preceptors in intensive care unit who had precepted nursing intern students during their clinical placement at King Abdulaziz University Hospital. Through my personal experience, nursing intern students were not prepared for the impact of their engagement with the expatriate nurses.

Most expatriate nurses in the ICU are not familiar with the Arabic language, which may have an impact on their relationship with nursing intern students and or their patients.

Through sampling process, I recruited specific individuals to help better understand the competencies. I used purposive sampling. Six nurse educators and nine nurse preceptors from KAU and KAUH were recruited and interviewed.

3.2.2.1 Sampling Criteria

Inclusion criteria that I considered in recruiting nurse educators included, (1) taught at least two years; (2) teach medical surgical nursing courses; (3) teach baccalaureate nursing program at King Abdulaziz University; (4) speak and understand English language; and (5) female. Preceptors inclusion criteria included; (1) precepted at least one intern student; (2) has at least two years of intensive care unit practice experience; (3) speak and understand English language; (4) work in King Abdulaziz University Hospital ICU; and (5) female. All my participants were speaking English as a second language and no opposition was found in any of the participants for using English language to conduct interviews.

3.2.2.2 Sampling process

I approached the intensive care unit head nurse at King Abdulaziz University Hospital with my research memos and invitation letters. I asked her to post my research memos on the unit board to recruit participants and to distribute invitation letters among preceptors. After that, I approached the unit's clinical instructor to book a mutually convenient room to conduct interviews of preceptors. All preceptors' interviews were conducted during their shifts, as it was convenient for them.

Then, I went to King Abdulaziz University to recruit nurse educators by requesting the dean of nursing department to spread the invitation letters amongst medical surgical nurse educators and lecturers. Later, I received phone calls from willing participants to schedule their interview time and place conveniently.

3.2.2.3 Sample Size

Total number of participants I interviewed was 15 participants. Nine preceptors and six nurse educators and lecturers were interviewed. This number of participants was sufficient to provide significant data that constructed the study. I interviewed all participants who came forward.

3.2.2.4 Informed Consent

I followed the University of Saskatchewan consent guide in preparing consent forms (Appendix A). Those consent forms were provided by me at the beginning of each interview. Participants who volunteered to participate in the study were consented into the study by me prior to data collection. Each participant was informed about the right to withdraw at anytime. Participants also were reassured that their data will be destroyed if they wish to withdraw from the study.

3.2.3 Data Collection

The data collection process was in the English language, which was the second language of all participants and through interviews following an interview guide (appendix B), which were audio taped and transcribed by me. Thus, the permission was obtained before data collection

from the University of Saskatchewan Research Ethics Board and authorities from the King Abdulaziz University and Hospital in Saudi Arabia. As the data collection process was in progress, I stored the data securely in my password-protected laptop, which was a separate place from the storage of the consent forms. During transportation, I safely kept the data on my password-locked laptop after backing up my data in the University of Saskatchewan secured website with a password-protected Cabinet account accessible only by me. I stopped recruiting participants when I reached data saturation, which is a term used in Interpretive Description to justify the number of participants and based on recurring patterns in the data (Thorne, 2008). Thus, data saturation was achieved in this study. I only interviewed six nurse educators because they were the only ones who had the inclusion criteria. More nurse educators may have been interviewed if they met the criteria. I stopped interviewing preceptors when I started to hear many ideas or perspectives repeatedly. I used my field notes to check for redundant thoughts and answers. Also, I was the primary researcher and all interviews were conducted by me, which can explain how I determined data saturation during the interview process.

3.2.4 Data Analysis

I followed the Interpretive Description method analysis. I personally transcribed all interviews into Microsoft Word files. I re-listened to the voice recording tape to reassure and clarify what each participant said. With the help of my supervisor Dr. Linda Ferguson, I punctuated participants' responses to reflect the correct dialogue and meanings. I coded all interviews through identifying noteworthy words and responses. Subsequently, I identified relationships and patterns using the inductive reasoning (Thorne, 2008). I supported all findings with participants' quotes to ensure the study rigor. I did not use any data analysis software such

as N-vivo because of the relatively small sample size and time constraints. The second step was finding patterns in those codes to combine the data under subcategories, categories, and themes as the last step in the analysis. These steps conceptualized the data into themes.

Prior to the interviews, I provided participants with a sheet of demographic questions that included age, country of origin, level of education, length of employment, place of employment, and length of employment in total. I presented the demographic data in general description to keep the identity of participants confidential.

An important aspect in interpretive description data analysis was done by me to immerse into data records and develop a sense beyond the immediate meaning of the data as suggested by Thorne (2008). I began the process of data analysis with coding the data. According to Thorne (2008), interpretive description needs extended analysis. Also, field notes were taken as a tool to document significant reactions, common responses by participants and my observations and thoughts, as additional data. The tradition of coding helped me to develop patterns. Then, I analyzed those patterns for relationships among categories and themes. Finally, I conceptualized those relationships between data patterns into thematic findings. I linked all my findings back and forth with the literature review, which can promote the data triangulation, which means data from a variety of sources that corresponded or contradicted with the study identified findings.

3.3 Ethical Consideration

I obtained ethical approval from the University of Saskatchewan Research Ethics Board to conduct the study. After that, I got two different ethical approvals in Saudi Arabia. The first one was from the King Abdulaziz University ethics and research committee. The other one was from the King Abdulaziz University Hospital unit of biomedical ethics.

Participants' identities remained confidential. All participants received an informed consent prior to their data collection. I stored consent forms separately from the data I collected. I maintained anonymity of participants by the use of code names where I used the letters "GP" for preceptor group, the letters "GE" E for educator group, and the letter "P" followed by a number to indicate participants. When I used their quotes, I used their code names. Participants were asked not to put their names on any identifying materials.

I reassured participants that their participation was voluntary. Participants answered questions that they were comfortable with answering, and they could ask to have the tape turned off at anytime. Withdrawing from the research project at anytime was possible with no penalty for participants. If participants wished to withdraw from the project, their data would be destroyed and would not be included in the study. However, if they withdraw after the analysis of findings, it would not be possible to remove their data from the analysis. A summary of study results would be distributed among participants from hospital and university.

3.4 Instrument

3.4.1 Researcher as an Instrument

In the transition from working as a bedside ICU nurse in Saudi Arabia to a nursing education masters student in Canada, it became obvious to me that there were certain misconceptions in identifying and relating theoretical competencies with clinical practice competencies of nursing interns. As I was one who formerly experienced some of these misconceptions, I now believe that my interview guide covered many of those possible misconceptions. I used the interview guide as an instrument for data collection by adopting the Canadian Standards for Critical Care Nursing Practice. Critical care term I included a variety of competencies of clinical practice and standards for intensive care nurses that would fit in the context of Saudi Arabia. As my future plan to be a nurse educator either in academic or hospital settings, I wanted to make a clear identification of theoretical competencies and clearly relating them with clinical practice competencies through a nationwide standard of competencies and practice. The apparent lack of critical care standards for safe practice was a concern to me while I worked in the ICU. Fortunately, I had the opportunity to pursue my master's degree. Through my research, I was able to uncover many aspects regarding the misconceptions in identifying and relating nursing intern students' theoretical competencies with their clinical practice competencies such as simulation.

3.4.2 Interview guide

Saudi Arabia does not have standards for nursing practice in ICUs. As a student in a Canadian university, I was encouraged by several people including my supervisor and committee

members to use the Canadian Association for Critical Care Nurses standard statement. That standard is used by Canadian hospitals nationwide. King Abdulaziz University Hospital has achieved and maintained their Canadian hospital accreditation. Therefore, it was very appropriate to develop my interview guide by using the Canadian standard with CACCN's written permission to include the document with the thesis (Appendix C). I was also convinced that because of the Canadian accreditation of the King Abdulaziz University Hospital, the Canadian practice standards of the CACCN would be relevant. It was appropriate to me to use the Canadian Association of Critical Care Nurses standard of practice in my study because KAUH was and still has accreditation by Accreditation Canada.

Chapter 4

Findings

4.1 Introduction

An interpretive description approach was used for the analysis of the data collected. The research questions addressed in this study were: 1) what do nurse preceptors and nurse educators believe are the competencies needed by new graduates to allow them to work safely in an intensive care unit in Saudi Arabia?, 2) what are the competencies nursing intern students should learn from their internship?, and 3) is there a difference between nurse educators and preceptors in the perception of these required or expected competencies?.

Themes for intensive care unit competencies included 1) needed skill competencies, 2) development of knowledge application competencies, and 3) strategies for quality improvement competencies. Demographic data are described generally to keep participants' identities confidential. The purpose behind using interpretive description was capturing themes and patterns in identifying and relating nursing intern students' theoretical knowledge of competencies with their clinical practice competencies. All data were coded for patterns and themes (Thorne, 2004). I was trying to explore meanings and explanations that may help in applying some of the study findings. This chapter will present the study results including demographic data of all participants as well as themes that were identified. Add rigour to ensure trustworthiness

4.2 Demographics

Fifteen participants were interviewed in this study, six in the nurse educators group and nine in the nurse preceptor group. Participation was voluntary. All the participants responded to my recruiting postings and invitation letters.

The first group was the preceptors group. It consisted of nine participants and they were all expatriates from India and South East Asia. None of them had received their nursing education in Saudi Arabia and all were educated in their country of origin. All of them were licensed RNs who had at least two years experience in the ICU of King Abdulaziz University Hospital. Six of the preceptors had previous experiences prior to working in KAUH in different settings than the ICU. The other three had their previous experiences in ICUs in their home countries. The preceptors' experience in King Abdulaziz University Hospital varied between two and five years. Preceptors' ages ranged between 24 to 45 years of age.

The second group was the nurse educators group. It consisted of six participants; three of them were Egyptians and the other three were Saudis. All participants in this group had their baccalaureate of science in nursing education in their country of origin. Egyptian participants held their doctorate degrees and had their graduate education in Egypt as well. One of the Saudi participants had her masters degree from the United States of America. The other two have been accepted to a course-based masters program in the United Kingdom. Three participants had three years of medical surgical teaching experience. One of the nurse educators had two years teaching experience and the other two participants had more than six years teaching experience. Nurse educators' age ranged between 26 to 49 years.

4.3 Identified Competencies

As the sample had two different groups, I will be presenting results of each group and then make a comparison between the two. Preceptors and nurse educators groups identified many areas of competencies that nursing intern students need in order to practice nursing safely, which they categorized as skill, advanced skill, and quality competencies.

4.3.1 Needed Skill Competencies

Both groups identified some skill competencies that nursing intern students were expected to have in order to safely practice nursing in the intensive care unit. Skill competencies were communication, monitoring, observation, and assessment.

4.3.1.1 Communication

Participants mentioned the importance of communication from various perspectives. The first aspect was the communication with patients and their families. Good communication can assist nurses to reduce the stress that patient and family may experience during hospitalization. Perspective of preceptors included*"... we are communicating with polite manner because already they are in intense mood..."* (GP-P5), and *"... they can call, we are telling them the current condition of the patient condition, of the patient to them. We are making a good rapport with them..."* (GP-P8). Preceptors indicated the importance of using communication skills to support and reassure patients and their families. Nurse educators agreed with this perspective *"... respect the patient's culture. Be true. She should do her part, communicate with the family..."* (GE-P6) and, *"... communication is very important, giving a call at anytime is accessible for everyone..."* (GE-P7).

Communication is also important from the perspective of the interdisciplinary team. Both preceptors and nurse educators expressed that health care providers communicate toward improving their practice and the quality of care provided to the patient *"... we are multidisciplinary team. We are collaborating with each other, we are all working together and we are trying to improve the practice and the health standard of the patient…"* (GP-P10), *"... each health worker like dietician, pharmacy, the lab people, cleaners all are including in the health. So, there is a link between this is proper communication is very important because we have to communicate each other…"* (GP-P13), and *"... good communication, assessment between the doctor and the nurse, so to update the doctor about his or her physiological balance…"* (GE-P14)

When participants were asked about their feedback regarding nursing intern students' communication skill competency, answers demonstrated consistency. Nursing intern students showed good communication skill from all aspects. They know Arabic and English languages, which made their communication easy with patients and their families and the health care providers. The fact that interns spoke both English for communication with health workers (expatriates) and Arabic for communication with patients and families was seen as a strength. *"... communication is okay. They know English, their communication is okay, yes, with the patient. Also they are talking Arabic. Communication is there okay…"* (GP-P8), *"... they can communicate very nicely because especially in this country and they know the language and all so they can deal with the patient. If conscious patients, communication is very positive from their side, relatives, doctors and all that is not a problem…"* (GP-P13), and *"... they are good in the observation and communication…"* (GE-P6).

4.3.3.2 Monitoring

Monitoring was another skill competency revealed throughout the interviews. Nurses monitor the patient continuously for any progression of condition and the need to intervene. Also, participants expressed the importance of monitoring the patient hemodynamics through machines. *"... we will continuously monitor the hemodynamic stability of the patient. If there is any hemodynamic instability we are informing the doctor immediately…"* (GP-P5), and *"... the nurse should know how can I decrease the dose and at the same time monitor the patient hemodynamic without having the patient affected by this. Monitoring not only for the physiological, we have to train the graduate nurses or the interns even using the machines…"* (GE-P7). Preceptors indicated that nursing intern students showed good monitoring skills during their ICU placement.

When participants were asked about their nursing intern students' monitoring skills, they clarified that nursing intern students expressed their ability in monitoring skill through vital signs charting. *"... they are learning how to do monitoring how to do vital charting and all and they are doing, yes. With us they are doing and they are taking one more sheet like our flow sheet, they are taking one extra one and they are practicing that how to monitor the vitals and they are doing…"* (GE-P7), and *"... monitoring and assessing the patient hourly…"* (GE-P14).

4.3.3.3 Observation

Participants implied observation skill competency to be needed in the ICU setting. They listed their action sequences after applying their observations to a specific situation on their patient. *"... if we have monitored any deterioration we will inform, of course ..."* (GP-P10), and

GP-P13 *"…I know why the patient is desaturating maybe because of hypoxia. I can do suction because I am continuously monitoring. Maybe she is coughing. The pressure is high so I can do suction and I can see the saturation. Still saturation is low means I will do Ambu bag. I will increase the FIO2. I will change the ventilator's support. I will see the conscious[ness] level of the patient so I can continuously observing the condition of the patient…"*

Participants mentioned that nursing intern students showed a good observation skill competency in regards to observing patient's condition and progress. However, few of them mentioned that having a good observation skill is not necessarily meaning that nursing intern students were able to identify critical condition immediately. *"… they are good observers…"* (GP-P10), and

GP-P9 *"…they are observing while we are doing something. They are asking what is this? They are observing. They are studying only that is why they cannot identify now, Whenever they are seeing more, more critical patients then only they can identify, after coming here two three days, they are identifying…"*

4.3.3.4 Assessment

Assessment was the least explicitly mentioned skill competency to be needed in the ICU setting, even though it was implied often. Participants, both preceptors and nurse educators, stated in the ICU environment how important assessment is to report condition changes. They indicated how significant it was to assess the patient's condition continuously. Assessment could also be to the intervention done to the patient for evaluation and case updates. No specific area of

assessment was mentioned*"...we will according to doctor's order, we will do the investigations and we will we also trying to find out what is the, we will do CG brain X-rays, we will assess that, follow up the result ..."* (GP-P10), *"... she has to know what is the uh, what we call it uh, assessment, she can report what changes has to be done..."* (GE-P12), and *"...she should knows everything about the patient diagnosis. What is his progress uh, health status, physical assessment. Assess the patient condition hourly ..."* (GE-P14).

However, they mentioned how nursing intern students expressed assessment skill competency during their ICU placement. They were able to relate the diagnosis of their patients by following the hospital's assessment protocol.

> GP-P14 *"...monitoring and also assessing the patient condition hourly um. They can know the diagnosis of the patient ..."*

> GP-P10 *"...yes, here we have one protocol how to assess the patient and we are teaching them how to assess. They are also assisting us assessing the patient from head to foot assessment they are also doing ..."*

4.3.2 Development of Knowledge Application Competencies

The theme development of knowledge application competencies, uncovered some advanced skill competencies, which participants stressed that nursing intern students need in order to work in the ICU. They believed that gathering data and then analyzing them were key competencies in intensive care unit nurses. After that, nurses could make decisions regarding the ongoing intervention of her patient and use their critical thinking and interdisciplinary relationship in providing a better and safer nursing care.

4.3.2.1 Data Gathering and Analysis

Participants mentioned that intensive care unit nurses need to implement and use their theoretical knowledge through gathering patients' data for analysis and identifying possible interventions and appropriate nursing care. Participants expressed that data gathering and data analysis are core competencies they usually use while working in the intensive care unit. They collect data from the patient's family while admitting the patient. Also, they use the lab results, ECG, books, and resource person such as clinical instructors to help them understand the data they have. After that, ICU nurses are analyzing and interpreting their findings to manage their patients accordingly. One of the preceptors explained how concerned she gets after admitting a patient if ever she lacked the knowledge regarding the case. She stated *"... we always look in the file and studying. If we don't know we will ask our seniors. I watch through the internet and doing research if I do not know that ..."* (GP-P3). Another preceptor stated; *"... they can see the ECGs, if they have any doubt they refer [to] the book, and they can refer the clinical instructors. They can refer the team leaders or seniors ..."* (GP-P13). This participant was treating her lack of knowledge about certain cases by referring it to a resource person or looking it up in references like books another stated. *"... she should be familiar with the patient status. She should read the file and gather the information, know the patient diagnosis and have enough information or fairly information about the patient status ..."* (GE-P6). This participant mentioned how significant it was for nurses to be familiar with their patient's status and be knowledgeable about it. Also, this participant stated that *"... she has to have idea about the technology, the new technology around the patient, blood gases. If there is acidosis or alkalosis*

she has to manage. She has to report for the physician about the condition minute by minute or step by step …" (GE-P11). It is clear that knowing about technology used in the ICU is important for nurses who work there to manage their patients with the best nursing care and report the status regularly. One of the participants explained how integrating findings is significant to ICU nurses *"… she has to integrate all findings together to reach later on, to reach the diagnosis, after that …"* (GP-P15).

4.3.2.2 Critical Thinking

Participants identified implicitly that critical thinking was a competency needed by nursing intern students after gathering and analyzing their patient's condition. Critical thinking competency came through action sequences in a response to noticing any changes that required intervention. One of the participants stated *"… what care needed. We are assessing patient need, what care patient need that only, that we are giving …"* (GP-P9), and "… *knowledge and assessment of hemodynamic of the patient, what the intervention I should do like that..."* (GP-P4). Critical thinking was considered as an important, prioritizing, and time-based competency. Intensive care unit nurses should critically think using the information in hand and based on that decide the appropriateness of the intervention for their patients, which lead to decision making competency.

4.3.2.3 Decision-Making

Participants explained that intensive care unit nurses should be trained to make decisions for their patients. If nurses were in doubt, they can also decide to inform their superiors or the physician to seek what is better for their patients *"… they should be trained very well, what first*

step they should take if the patient's condition deteriorated. Confident from their self to take a decision …" (GE-P14), and*"… if anything we have the doctor and we are informing them any doubts we have. Clinical instructor, if we can manage we will do otherwise …"* (GP-P2). Participants stated training intensive care unit nurses to make decisions for their patients would make them confident in their decisions. Through decision-making, ICU nurses were able to manage different patients' conditions through critical thought and making the right decisions for their patients.

4.3.2.4 Interdisciplinary Relationship

Participants stressed on how interdisciplinary relationships contribute in the care of the patient. Health care providers must collaborate together toward the goal of improving practice and the health standard provided to the patient through good interdisciplinary relationships with their colleagues to help them in providing high standard of nursing care *"… we are multidisciplinary team. We are collaborating with each. We are all working together and we are trying to improve the practice and health standard of the patient …"* (GP-P10), and *"… each one is having their own responsibility. Each health workers like dietician, pharmacy, the lab people, cleaners all are including in the health, so there is a link between. This is proper communication is very important because we have to communicate each other …"* (GP-P13).

4.3.3 Strategies for Quality Improvement Competencies

Intensive care unit nurses who were interviewed as well as nurse educators suggested so many competencies that relate to quality care and quality improvement. Quality care competencies were related to the patient and family and the ways to deliver best quality care to

them during hospitalization. Quality improvement competencies were related to policies at the King Abdulaziz University Hospital, which were applied by health care providers to provide best practice.

4.3.3.1 Quality Care Competencies

Participants identified competencies relating to patient and family. Those competencies were establishing a respectful relationship based on trust with patients' families through providing open access for them and providing support to families through out their unfortunate situation by orienting and teaching them about the patients' condition with simple language that fit their level of understanding *"... we will teach them the relatives. We include them in the understanding of the disease process of the patient, what is the initial problem of the patient and we will comfort them. Only understanding can comfort them. We will explain to them according to their level of understanding ..."* (GP-P4), and *"... by our truthful work we can gain that trust from them, then respect. We will give respect and take respect ..."* (GP-P10). Consequently, the outcome of initiating this respectful relationship with patient and family would affect the quality of care provided and reflect changes on patient's outcomes of care.

Participants mentioned that intensive care unit nurses must treat all patients and their families with equality and fairness *"... that is very much important we have to give care for all the patients in the same level, all everybody needs the same care ..."* (GP-P5).

Also, participants mentioned the importance of respecting families from the religious and cultural aspects especially if the patient was receiving palliative treatment.

GE-P7 *"... honest to gain their trust really, For the respect, we have some religious part of this respect specially for the female patients. It is a religious part and we have to respect it, home remedies, or herbal treatments. Once it has no harm, we have to accept it specially for the palliative care patients ..."*

4.3.3.2 Quality Improvement Competencies

Quality improvement competencies identified by preceptors were consistent with those identified by nurse educators. Identified quality improvement competencies were documentation, continuing education, teamwork, and maintaining feedback. Both groups suggested that those competencies were needed in nursing intern students during their intensive care unit placement.

Participants stressed on how documenting every little detail was important *" We should document whatever happening[to] the patient in each time we should document..."* (GP-P8). Nursing intern students were encouraged to document their nursing care with full details to protect themselves and their patients. KAUH provided a workshop on correct documentation for staff nurses. As for nursing intern students, their documentation skills might occasionally be evaluated by their preceptors or their nurse educators, which may indicate a lack in their documentation skill.

Several participants mentioned continuing education, which they believed affected the nursing role participation in the patient's treatment care plan *"... she can share in the patient, health condition, treatment plan. Sometimes nurses should take courses um, to have an idea about these skills and of course practice it during their time. Any conferences ..."* (GP-E14).

Continuing education for staff nurses can keep ICU nurses updated on new technologies, procedures, and intervention regarding related conditions.

Another quality improvement competency identified by participants was seeking feedback from families regarding the treatment provided to their patient and the nurses' care delivered to the patient *"... Family satisfaction survey is there. We will give the paper; they will write it and they will give back ..."* (GP-P8). The fact that King Abdulaziz University Hospital provide a family satisfaction survey to obtain families feedback on the health care provided was a step to maintain their accreditation, which they still have.

Participants also mentioned how team work affects the overall health care provided to the patient *"We are working here as a team. We highly observe the right of the patient, respect of each one of us, so that we can deliver the correct and the proper patient care..."* (GP-P4). Teamwork was mentioned many times as one of the good work strategies in the ICU. Staff nurses helped each other to maintain providing the best care to patient, to reassure providing the correct care to the patient, and to support the right of the patient.

4.4 Factors Affecting the Experience and Outcome of Nursing Intern Students in the ICU

Throughout most participants' interviews, there were number of identified factors that can affect nursing intern students' performance and boost their intensive care unit experiences and outcomes. Factors identified by both preceptor and nurse educators corresponded. Most identified factors were related to the internship program that nursing education department at the King Abdulaziz University Hospital planned for nursing intern students. Those factors were time

period, orientation, practice focused ICU exposure, guidance and supervision, performance evaluation, and personality differences.

4.4.1 Time Period

They agreed that nursing intern students needed an extended time in the ICU to be familiar with the work routine of the unit; some suggested three months exposure. A participant suggested, "*in ICU training with a student at least from three to six months training to be, at the end of six months maybe the optimal level will be reached*" (GE-P15).

> GE-P7 *"… They would not be so much prepared. The rotation is very short in the intensive care unit, the elective if they got an interest in ICU and they select to take their electives in the ICU at that time. They can be almost prepared …"*

Another participant explained how the time period of the current internship program was not enough and could cause a lack in handling patient to nursing intern students *"one month is not enough, more time needed for them handling the patient…"* (GP-P4)

The time period planned for intensive care unit in the current nursing internship program in King Abdulaziz University Hospital was not enough, as most participants clarified. Participants suggested either a longer placement in the ICU or nursing intern students be advised to take their elective period in the ICU. Most participants perceived that nursing intern students were not well prepared to work in the ICU after their internship due to the short time period.

4.4.2 Orientation

Participants suggested that nursing intern students needed an orientation to help them recognize and organize their priorities while exploring the intensive care settings. Also, participants mentioned that nursing intern students should be familiar with the protocols of practice in the ICU and the routine there *"... they need this... our routines and all, Intensive care routines and our protocols ICU protocols. They have to familiar with that ..."* (GP-P2). Some participants mentioned that nursing intern students were afraid to deal with intensive care unit machines because of their unfamiliarity about those machines. Therefore, many of the participants suggested an orientation period for nursing intern students to properly familiarize them about the ICU settings and help them become confident *"... they are afraid with the new machine. They are just afraid to touch any machine that they are unfamiliar with."* (GP-E6).

4.4.3 Practice Focused ICU Exposure

Another factor addressed by participants was supporting and focusing the exposure of nursing intern students to hands-on practice as opposed to observation and monitoring *"... so once they are coming in the ICU and they will be handling with us staff nurses. They are good, just support. They need support... "* (GP-P3), *"... if given the chance, if given the time and opportunity, they will do very much and gain experience ..."* (GP-P4). Participants counted their act of providing opportunities to nursing intern students as a support. Participants stressed on the positive effect of exposing nursing intern students to practical opportunities to develop their skills and learning outcomes of the intensive care unit experience.

4.4.4 Guidance and Supervision (Resource Person)

Both groups also mentioned how guidance would help nursing intern students during their ICU placement. Preceptors stressed the importance of having a resource person and how it helped them during their practice as staff nurses *"We encourage them to learn. And usually we show to them how we are doing that. Then, after that we encourage them to do by themselves, alone with our supervision …"*(GP-P4). Nurse educators mentioned that nursing intern students were aware of their abilities and once they need help, they will seek it.

> GE-P12 *"... There is a head nurse. If there is some decision she should take on the spot and some other action, she should ask before, and if there is any I mean that any regress[ion], she could uh, observe any deterioration on the patient case. She has to report..."*

Participants frequently mentioned that their resource persons and their guiding persons were either clinical instructors, head nurses, or senior staff *"… it is happening. Like one case will come so most of us we are familiar with those cases. Sometime there will be some cases, if we don't know, we will ask our seniors …"* (GP-P3). Participants clarified that once they lacked certain knowledge regarding specific case, then they seek help.

4.4.5 Performance Evaluation

Another factor that could affect nursing intern students' ICU experience from the perspective of participants was evaluating nursing intern student performance after their placement. As an intensive care unit nurse at the KAUH, nurses were having annual exams to evaluate them regarding their intensive care knowledge and the protocol followed in KAUH, *"...*

they will evaluate each nurse; our clinical instructor, our head nurse, deputy head nurse. They will evaluate us, means they will ask questions. Anything. We are back from our field, [it] will be exams we have to pass …" (GP-P1).

Participants stressed on increasing the frequency of evaluating nursing intern students to provide them with the opportunity to ask questions, as they would be used to that person *"... they need frequent checking on them. Needed everyday checkup means. They have to ask the about the patient and all, what is the management, what is the patient condition, like that …"* (GP-P2). Participants explained that nursing intern students needed frequent checks regarding their information about the management and intervention provided and the progress of the patient.

4.4.6 Personality Differences

Further, participants mentioned that the difference in personal performance of preferring different nursing settings could markedly affect nursing intern students' performance and experience *"It is individual interest. Like some are interested to learn those things, some are not like [interested]."* (GP-P1), and *"... if I said they worked for their prescribed rotation period, let us say one month, and they added the elective; if they got an interest in ICU, and they select to take their electives in the ICU, at that time, they can be almost prepared …"* (GE-P7). Participants explained how personal preference of nursing intern students could change their intensive care unit outcome. The preference to work in intensive care unit with providing the time during their internship would make nursing intern students prepared to work in the ICU.

4.5 Lacking knowledge and limitation

The last theme identified was related to the lack of knowledge that was verbalized by participants to some of the interview questions in some practice and education aspects. Participants' lack of knowledge were in the following aspects; standards, simulation experience, and evidenced-based research.

4.5.1 Lack of Knowledge Regarding ICU Standards

Most participants were not familiar with either national or international standards related to intensive care nursing. Some participants identified the King Abdulaziz University Hospital policy and procedures to be the standard of practice they were familiar with *"...standards means we will have the annual exam each year. We have critical care standard also and ... we have orientation here, and yearly they will be an evaluation for us ..."* (GP-P1). Other participants referred to the annual exam evaluation provided to staff nurses by nursing department at KAUH to be the standard of practice they knew *"... I am familiar with King Abdulaziz University Hospital standard of practice related to the intensive care unit. There is specific standard related to that and every nurse should that work in there should be familiar with this booklet."* (GE-P6). Evidently, intensive care unit staff nurses and faculty members of King Abdulaziz University and Hospital were not familiar of any national or international guidelines or standards related to the ICU other than the policy and procedure manual that each unit had.

4.5.2 Lack of Simulation Understanding

Participants in the preceptors group lacked awareness of the meaning of "simulation" , and after explaining what simulation meant, they mentioned that code blue drills and basic life

support class to be the simulation exposure that nursing intern students received during their internship placement in the ICU *"What that mean, simulation?"* (GP-P2), and *"…the code blue drill we are practicing with the demo. This dummy demonstration and code drill, that only, usually we have twice in a month. We have code blue drills in the ICU…"* (GP-P5).

On the other hand, nurse educators knew the meaning of "simulation" and they stated that they provide their students with a practice lab once a week, followed by a re-practice lab, to provide opportunities for all students to participate, engage, and practice the skills *"… twice a week, once for practice and one for re-practice, one for demonstrating I mean and another class for re-practice."* (GE-P14), and

> GE-P6 *" Once a week we have a demo, in the beginning of the week for two hours. Then after one or two days, we do re-practice in simulation lab. They put their hand on. There is a specific doll for every subject, and they do this re-practice for at least three hours, and the instructor make sure that every student did their part."*

They identified the simulation experience that their students had to be the regular lab they provide. Evidently the department of nursing at the KAU was not fully equipped with such laboratories even though they provided advanced dummies to nursing intern students to practice their skills in labs.

4.5.3 Lack of Knowledge Regarding Ongoing Evidence-Based Research

King Abdulaziz University department of nursing offered a research course for undergraduate level students. Nurse educators mentioned that the research course offered by their department provided students with a brief description of and introduction to research.

GE-P6 *"In King Abdulaziz University, we have research course in fourth year of undergrad students, so it help them to have the basic idea about the research skill, how to do it and the type of the research. I think this course is very helpful and good enough to prepare them with the basic idea about the research."*

Further, nurse educators mentioned that KAU recently offered a Master's degree in Nursing and they teach their graduate advanced research course.

GE-P12 *"They are taking research course, nursing research course in the fourth year in the second semester, and nowadays we have started the post graduate studies. I taught the nursing research, and we taught them same like undergraduate plus it was so advanced, I mean that let them to apply actually, and most of them they have prepared their proposals based on the nursing research considering the legal and ethical issue in nursing research."*

When preceptors were asked about encouraging research skills for evidence-based practice, answers came with uncertainty about ongoing research at the King Abdulaziz University Hospital. Participants also lacked the knowledge about the nursing educational program regarding research at the King Abdulaziz University.

They categorized their participation in data collection for different researchers as a research encouragement *"…the some researchers are coming and we are encouraging that. Yeah, sure, we are encouraging always. As you are coming as a researcher, we are encouraging the practice that we are coming and participating in this one…"* (GP-P5). Others said that they never witnessed any ongoing research and that nursing education department at the KAUH

offered a research lectures that they were required to attend *"I hear about research but I never came to that situation what they are doing. There will be classes, nursing research classes in the nursing education. I still did not attend that class. Hopefully next couple of months…"* (GP-P3). Also, they considered that statistics done by the infection control department at the KAUH as a research attribute of their unit.

> GP-P1 *"… we will be monitoring that one VAP, ventilated associated pneumonia. If it is a bedridden patient, we have a bed sore assessment forms, so everything will be assessed [on a] daily bases. The clinical instructor, she will be taking the total count of the patient per month and statistics will be displayed on our notice board. So in the statistic, will come to know the percentage each month. It is increasing or decreasing, our care is better or not, and monthly we will have the unit meeting. If anything is grow [increased] back from that, they will be explaining to us to improve our nursing care."*

Infection control evidence–based statistics helped nurses in KAUH intensive care unit to improve their nursing care based on the report they received from the infection control department. Evidence-based research contributed vitally in the nursing outcomes during hospitalization; therefore, it will be essential to encourage staffs' participation.

4.6 Summary

Comparing responses from both groups reveals common similarities in identifying needed competencies for nursing intern students. They agreed on importance of communication, monitoring, and assessment. Both groups encouraged improving nursing intern students' ability for critical thinking and decision-making. Also, participants agreed on the factors affecting nursing intern students' internship outcome such as time period, orientation, and performance evaluation. Participants' responses came consistent that nursing intern students lack simulation exposure. However, regarding evidence-based research, nurse educators encouraged research through teaching brief research methods in fourth year of their baccalaureate degree. Most preceptors identified their encouragement of evidence-based nursing through infection control statistics and participating in data collection as participants.

In the analysis of these interviews, interpretive descriptive design was completed through coding participants' responses, finding patterns throughout data, and conceptualizing ideas into themes. A discussion about questions of the interview guide was provided prior to the analysis. Demographic data description was also provided in general description. Some important outcomes were identified and they are going to be discussed in further detail in the following chapter.

Chapter 5

Discussion

5.1 Introduction

This interpretive description study described the intensive care unit competencies from the perspective of preceptors and nurse educators in Saudi Arabia. The purpose of this study was to identify needed competencies by nursing intern students in order for them to practice nursing safely as graduates in the intensive care setting. The research questions addressed in this study are 1) What do preceptors and nurse educators believe are the competencies for nursing intern students following their internship to allow them to work safely in an intensive care unit (ICU) in Saudi Arabia? 2) What are the competencies nursing intern students should learn from their internship, and 3) Is there a difference between nurse educators and preceptors in their perceptions of required or expected competencies of the nursing role in ICUs? Limitations of this study and strengths are noted. Recommendations for applying the Canadian Standard of Critical Care Nursing Practice were made and further research studies are proposed.

This chapter will provide a thorough discussion of the findings mentioned in the previous chapter. This includes an interpretation of primarily identified themes, which emerged during data analysis. A demonstration of some categories, which appeared more than others, will be noted through this chapter. In addition, competencies identified by participants and those listed in the Canadian Association of Critical Care Nurses (CACCN) standards will be compared in this chapter.

5.2 Discussion of the Results in Regards to Relevant Literature

As mentioned in chapter 3, the literature review for this thesis revealed four different themes that were relevant to these study findings. Themes were as follows: perception of competencies, methods of improving competencies, identifying competencies, and nursing in the Middle East. Most themes were reflected in the findings of this research.

5.2.1 Perception of Competencies

Throughout the literature, competencies were perceived from different viewpoints including students, recent graduates, intensive care unit staff nurses, nurse administrators, faculty members, and program deans or directors (Andrews et al., 2005; Clark et al., 2004; Kiekkas et al., 2006; King et al., 2003; Maben et al., 2006; Santiano & Daffurn, 2003). In this study, preceptors who were intensive care unit staff nurses, and nurse educators who were faculty members were interviewed to perceive their perception of competencies in the context of Saudi Arabia.

According to the literature, when nursing students do not receive support or they lacked the nursing role models, their process of implementing their knowledge into the practice is damaged (Maben et al., 2006). Also, providing special programs related to the intensive care unit were found in the literature to positively enhance the graduates' perceived level of competence (Santiano & Daffurn, 2003). Most participants referred to the importance of guidance and the presence of a resource person to help nursing intern students during their intensive care unit placement. Even though participants did not mention nursing role models, they implied that senior staff nurses, head nurses, and clinical instructors were the nursing role models who

nursing intern students referred to if they required any help. Further, participants stressed the importance of the regular attendance of a resource person, which increased nursing intern students' confidence in regards to their theoretical knowledge and clinical practice.

It was supported that teaching nursing intern students about contemporary critical care technical equipment positively affected their clinical practice (Kiekkas et al., 2006). Participants of this study shared the fact that nursing intern students needed an orientation to be familiar with the intensive care unit settings. Some participants related the need of an orientation to the fact that nursing intern students showed some hesitation in regards to ICU machines and their unfamiliarity of them. Nursing intern students would also get familiar to the intensive care unit protocols and procedures during that orientation, which would positively affect their outcome during their ICU placement.

Clinical placement was found significant in increasing the likelihood of nursing students seeking employment at the same place (Andrews et al., 2005). No participants mentioned the significance of clinical placement in the context of Saudi Arabia. However, personality differences and personal preferences were mentioned by participants to be significant on the likelihood of nursing intern students seeking employment at the same settings.

Students' self-efficacy was another factor found that affect students' commitment to the learning process and their engagement through skills (Clark et al., 2004; Stump, Husman, & Brem, 2012). The higher students' self-efficacy, the more they were committed to the learning process and skills engagement (Clark et al., 2004). However, participants of this study mentioned that time period, practice-focused ICU exposure, and performance evaluation of nursing intern students during their internship placement at the critical care settings would affect students'

performance positively and boost their intensive care unit experience. There was mutual agreement among preceptors and nurse educators that the time of the current internship program placement of the intensive care unit was not enough for nursing intern students to develop a sense of confidence to safely practice their knowledge. Participants suggested either a longer internship placement period or an elective period for those students who were interested in the area of intensive care unit, in order for nursing intern students to fully explore the area to improve their knowledge and practice. Most participants found that nursing intern students were not completely prepared to work in the ICU once they finished their internship program, due to the short placement that they had. Regarding evaluation of students' performance, participants stressed the significance of increasing the frequency of evaluation on nursing intern students' performance during their intensive care unit placement. When nursing intern students receive frequent feedback and evaluation of their performances from specific individuals during their intensive care unit placement, their chances of asking questions in regards to what they lack and seeking information increased. They would not hesitate to do so because of their previous communication and familiarity of that person, either preceptor or nurse educator. Participants stressed focusing on the nursing intern students' exposure to hands-on practice. Nursing intern students' hands-on experience was suggested to develop their skills and increase their learning outcomes during their ICU exposure.

Also, researchers in the literature supported the difference in viewpoints of nursing faculty members and intensive care unit staff nurses. They had differences regarding the competencies needed from BSNs graduates to meet health agencies need (King et al., 2003). In contrast, King Abdulaziz University nursing department faculty members' answers regarding needed competencies corresponded well with King Abdulaziz University Hospital staff nurses'

perceptions. Many of those competencies corresponded to those listed in the CACCN standards document. They will be discussed in further details later.

5.2.2 Methods of Improving Competencies

Many scholars explored different methods to improve new nursing graduates' (nursing intern students) competencies through identifying some methods that may contribute to the development of their competencies (Hodges et al., 2010; Philpin, 1999). Some scholars were concerned about the transitional stages or phases that new nursing graduates go through after graduation and after starting their professional life (Duchscher, 2008; Romyn et al., 2009). Other researchers either explored or compared ways of teaching competencies to nursing students and strategies for educational and internship programs (Blum et al., 2010; Ivarsson & Nilsson, 2009; Miller & LaFramoise, 2009). Few scholars went through validating existing competency standards and some course contents (Fisher et al., 2005; Hynes et al., 2007).

No participants talked about the previously mentioned methods for possible improvement in nursing intern students' competencies, except the need to support them. Participants stressed on some leadership skills such as critical thinking, decision-making, and interdisciplinary relationships that nursing intern students need to work safely and competently in intensive care settings.

Participants implied that critical thinking skill was based on consequences and prioritizing what was the best for the patient. Even though participants implicitly mentioned it, critical thinking competency was an important, time saving, and prioritizing competency. Therefore, encouraging and teaching students critical thinking based on prioritizing situations

they may face would improve nursing intern students' critical thinking. It was not expressed by nursing intern students during their ICU placement due to their nature of internship program, which lacked the complex practical involvement. In the Canadian Association of Critical Care Nurses standards (CACCN, 2009), none of the competencies stated critical thinking but it mentioned that nurses working in the ICU must anticipate life-threatening situations to prepare for and prevent them through recognizing those situations and intervening accordingly. That finding indicated some consistency between the guideline document and my findings.

Nurses might get into a situation where they have to make immediate decisions even if it is as simple as informing their clinical instructor or the physician about the appropriate intervention. Decision-making skills as explained by participants was through training after spending appropriate time consulting with senior staff and nurses to gain confidence in their decisions with repetition. After improving nursing intern students' decision-making skill, their ability to manage different situations they may encounter will be improved as well as their confidence to handle challenges they may face. Canadian Association of Critical Care Nurses standards mentioned decision-making as a competency (CACCN, 2009), which intensive care unit nurses used as advanced skill to continuously manage, assess, and monitor their patients to promote an optimal physiological wellbeing. Therefore, it was a corresponding competency (CACCN, 2009).

Baccalaureate of Sciences in Nursing program at King Abdulaziz University instruction and homework language was English; therefore, nursing intern students who graduated from KAU showed good interdisciplinary relationships with other health team members who also spoke English as the language of communication and practice. The interdisciplinary relationships

that nursing intern students established aimed toward the best interest of their patients and health care providers must collaborate toward accomplishing that goal. The collaboration between health care professionals will improve the health care provided to patients. Participants' statements emphasizing the importance of interdisciplinary relationship and shared responsibilities corresponded with the CACCN standard of practice, which promoted the collaboration between patient, family, and health care team members.

The context of North American nursing literature was explored regarding transition stages of nursing intern students. It revealed that nursing intern students needed partnership between their educational programs and official mentorship programs to improve their competencies to find their places during clinical placement (Romyn, 2009). Moreover, literature uncovered that new nurses go through three stages after their graduation and at the start of their clinical placement (Duchscher, 2008). First stage was "doing what nurses should do" by participating and implementing their knowledge into practice. If their knowledge was not sufficient, they could refer their concern to more experienced nurses. Second stage was "being what nurses should be". As time passes, nurses get familiar with the hospital's settings and gain confidence. Third stage was "knowing what nurses should know", which was when new nurses reach their optimum abilities to work independently (Duchscher, 2008). Participants mentioned how time period of the current internship placement in the intensive care unit was not sufficient for nursing intern students to reach their optimal capabilities.

Methods of teaching competencies were explored and others were compared (Blum et al., 2010; Ivarsson, & Nilsson, 2009; Miller, & LaFramboise, 2009). The structured classrooms and clinical settings developed better in-depth understanding about safety and quality of health care

concepts and attitudes (Miller, & LaFramboise, 2009). In this study, participants identified competencies regarding quality care and improving quality. Even though students of BSN program at King Abdulaziz University did not receive a structured classroom instruction about safety and quality care, participants stressed the significance of that practice on their feedback from patients and families. Therefore, the quality improvement team at King Abdulaziz University Hospital provided lectures to staff and nursing intern students to give them the sense on how important quality care improvement for hospital accreditation.

Further on methods of improving competencies, the teaching role of nursing intern students was challenging. Nursing intern students faced difficulties delivering information from their classroom theoretical content into practice (Ivarsson & Nilsson, 2009). Participants identified quality care competencies that related to patient and family. Participants did not mention the teaching role of nursing intern students; however, they mentioned that competencies of quality care included providing families with explanation about the condition of their patient through simple language that corresponded to their level of understanding. It resembled the teaching role for the nursing intern students. Nursing intern students may support patients' families through teaching and explaining to them about the condition. Preceptors who were interviewed mentioned many competencies related to quality care and improving quality, as did nurse educators. Competencies that were related to patients and their families and ways to deliver best quality care were associated with quality care competencies. Further, competencies related to polices at the King Abdulaziz University Hospital that were applied by health care providers to provide best practice were associated with quality improvement competencies.

As for quality care competencies, participants stressed on relationship establishment with patient and family based on respect and trust. They mentioned that trustful and respectful relationships could be established through providing families with open access to know about the condition of their patients and to support them during their crisis. Family support could be through teaching and explaining to them about the condition using simple language to fit their understanding level as one of the participants said, " *only understanding can comfort them*". A result of an increase in patients' care outcomes might happen due to this respectful relationship.

Participants explained that patients must be treated equally and receive fair care. Patients would feel that their dignity was preserved when equal and fair health care was provided as nurses would provide their care by respecting their patients' diversity including ethnicity, age, gender, socioeconomics status, and spiritual beliefs. Participants stressed the importance of respecting families from different aspects such as religion and culture especially when patients were receiving palliative treatment. It was not clear if nursing intern students expressed those competencies; therefore, they should be evaluated for those competencies to have the sense of providing high quality care.

Quality improvement competencies as mentioned consistently by preceptors and nurse educators were documentation, continuing education, teamwork, and seeking families' feedback. Nursing intern students lacked those competencies and participants explained that those competencies were needed to enhance their intensive care unit placement outcome.

Nursing intern students were encouraged to practice documentation competency to confirm care provided to the patient and patient safety. The importance of documentation was obvious as KAUH offered a workshop to staff nurses for correct documentation. Encouraging

nursing intern students to attend such workshops would affect their performances positively as they might attempt to practice what they had learned during documentation workshops through their ICU placement. Efforts to standardize documentation on a hospital level were clear through promoting documentation workshops among staff and nurse educators.

Participants mentioned continuing education, which affects nurses' participation in patient's treatment plans. The more nurses were exposed to new technologies and procedures regarding intensive care unit patients' conditions, the more they would be included in the treatment plan because of their up to date knowledge. Therefore, nursing intern students must be encouraged to attend in-service to get familiar to recent and important topics related to the ICU.

Seeking families' feedback about provided treatment and nursing care delivered to the patient was another quality improvement competency. Participants mentioned that at King Abdulaziz University Hospital, families were provided with a survey to give their feedback on health care services provided. The family satisfaction survey was known only to preceptors but suggested by nurse educators, which indicated a lack of knowledge regarding quality improvement from nurse educators' viewpoint. KAUH used this satisfaction survey as one component to maintain their Canadian Accreditation, which they still have. Nursing intern students were not exposed to this competency during their internship due to the nature of their internship program, which concentrated on observation, monitoring, and assessment.

The teamwork competency was agreed upon all participants to be one of the good work techniques to effectively increase the overall health care provided to patients. Teamwork competency enhanced the reassurance in providing the correct care to the patient through double-checking and counter signing medications. Nursing intern students helped their preceptors during

their intensive care placement and it was considered as a teamwork action. Therefore, the potential of the teamwork competency was expressed by nursing intern students.

Documentation and seeking out families' feedback were mentioned in the CACCN standard that intensive care unit nurses must perform. Continuing education and teamwork were implicitly derived from CACCN standard. Even though not all competencies in CACCN standard were mentioned, but competencies came out consistent with the CACCN standards of practice.

A comparison between regular lab and high technology methods on students' clinical skills revealed that traditional lab teaching method was a valid way to provide students with clinical competencies and confidence (Blum et al., 2010). Simulation was defined as a situation or circumstances made to make a possibly closest clinical setting resemblance (Rauen, 2004). Based on participants' answers, it was demonstrated that nursing intern students were not exposed to simulation as defined and known in the literature, however; they were occasionally exposed to Code Blue drills with a slight chance to participate. Participants of this study did not mention any different methods of teaching class rooms and related labs. Nurse educators showed their knowledge regarding simulation teaching method; however, the description of simulation they gave was the description of a regular laboratory experience and not necessarily of a simulation lab. Participants from the preceptors group showed some lack of knowledge regarding the meaning of simulation. They counted that having the monthly Code Blue drill as a simulation to nursing intern students at KAUH, even though nursing intern students would not have the same opportunity to participate in Code Blue drills scenarios because their participation was not a mandatory requirement their internship program.

The significance and usefulness of published and on-site written standards of intensive care unit practice to nurses who were interested in working in ICU was found (Hynes et al., 2007). Participants showed unfamiliarity of either national or international standards related to intensive care unit nursing care. They referred to King Abdulaziz University Hospital policy and procedure to be the standard of practice they follow. The absence of nationally published standards of practice led to their lack of knowledge; if Saudi Arabia had nationally trusted standard of practice, all nurses should have known about it. Also, participants' lack of knowledge regarding international standards of practice made it unclear for them that following policy and procedure is different than following an official standard of practice. Following a clear standard would help nursing intern students to follow, apply, and practice their knowledge based on official standard, which may increase their confidence and interest to work in intensive care unit.

5.2.3 Identifying Competencies

Scholars explored many ways to identify competencies such as developing a model for clinical settings to compare actual and optimal competence, the effect of student-led simulation teaching approach, describing and evaluating the structured observation and assessment of practice, and validating existing competencies (Levett-Jones et al., 2010; Meretoja, & Koponen, 2012; Piscotty et al., 2011; Porte-Gendron et al., 1997).

The optimal competence level of nurses' performance is often higher than actual self-reported competence (Meretoja, & Koponen, 2012). In the context of Saudi Arabia, there was no existing model for clinical settings of actual and optimal competence. Student-led simulation teaching approach was supported in the literature to be an effective way to improve self-rated safety and quality competencies even though it did not increase students' test results. As

previously mentioned, simulation was practiced in the context of Saudi Arabia, although at regular labs or Code Blue drills.

In the literature, the principle that nursing intern students need to be exposed to complex clinical context to assure quality of clinical assessment was proven to be effective (Levett-Jones et al., 2010). In another study, an agreement was found between nurse educators and nurse managers in regard to the beginning-level skill competencies (Porte-Gendron et al., 1997). Participants of this study also showed an agreement that nursing intern students showed their capabilities in identified skill competencies such as monitoring, observing, assessing, and communicating. However, the internship clinical context in KAUH lacked the complexity that was proven to be effective in enhancing the development of competence because nursing intern students generally observe, assess, and monitor during their internship. They showed adequate ability of monitoring, observing, and assessing of their patients.

A mutual agreement was found between participants from both groups' about needed skill competencies, development of knowledge application competencies, and strategies for quality improvement competencies that nursing intern student had to have in order to practice the nursing profession safely. Participants identified a number of competencies that nursing intern students need to practice nursing safely in the ICU, which I categorized into few themes needed skill competencies, development of knowledge application competencies, and strategies for quality improvement competencies. Finally, strategies for quality improvement competencies included quality care competencies and quality improvement competencies. Identifying themes from participants' interviews showed a clear consistent between both groups. That agreement indicated the similarity of needed competencies expected from nursing intern students.

Needed skill competencies were communication, monitoring, observation, and assessment. Each of those competencies corresponded in both groups. In regards to communication, nursing intern students' capabilities to communicate in English language is correlated to their acceptable level of English language as it was their instruction and homework language and the interdisciplinary communication language between health team members was English language too. Participants stressed the significance of communications among health care providers, and patients and their families. Providing sufficient communication can reduce stress triggered by hospitalization. Nursing intern students could use communication skill to support and reassure patients and families when they are uncertain and questioning, as they know Arabic language that most of hospitalized patient at the King Abdulaziz University Hospital spoke. Participants mentioned that nursing intern students showed good care to patients and families through communication as most nurses at the ICU were expatriates and their usage of Arabic language was a few words.

Also, communication skill was important from the aspect of the interdisciplinary relationships. Participants expressed that health care providers were communicating to accomplish common goals, which were refining their provided practice and improving the quality of care delivered to the patient. Currently, King Abdulaziz University Hospital promotes the use of SBAR (Situation, Background, Assessment, and Recommendation) communication technique among health team members, even though participants did not mention it. SBAR standardized method of communication allowed the delivery of subjective and objective useful information and enhanced patient safety (Hohenhaus, Powell, & Hohenhaus, 2006). Applying the SBAR as a method of communication would develop the optimal outcome regarding interdisciplinary relationships, as better communication could lead to better teamwork. Nursing

intern students communicate clearly, as they know fairly good English but without a standardized communication method. The use of the SBAR communication technique can develop nursing intern students' communication skill and lessen the inadequacy or inaccuracy that some of them may show.

Better communication provided by nursing intern students can contribute in the enhancement of patient care, improve safety, and reduce the anxiety that patient and family may experience. Even though SBAR method of communication was not mentioned in the CACCN standards of practice, nursing intern students may be encouraged to show appropriate communication skill with patients and their families and use the standardize communication method SBAR with other health team members.

Further, patients' statuses in intensive care unit were considered rapidly progressing conditions; therefore participants stressed on the importance of monitoring skill and explained that through continuous monitoring, life threatening situation could be identified. A situation where patients' hemodynamics might fluctuate from what was recorded by the assigned registered nurse indicated the requirement of an intervention and only continuous monitoring of the patient could reveal that fluctuation or change in the situation. Therefore, nurses monitored intensive care unit patients continuously for any progression in their conditions, which was a maximum of every hour or a minimum of every five minutes if there were ongoing special procedures. They clarified that nursing intern students showed acceptable monitoring abilities, as they were able to record patient's vital signs, monitor the ventilator parameters, and chart their input and output during their placement in the ICU.

Further, participants implied the significance of observation skill competency, which was applied after their identification of certain conditions and followed by their intervention-sequenced actions to protect the patient. Even though nursing intern students showed a fairly good level of observation skill, participants expressed that they were not able to detect critical conditions of their patients in the beginning but with time, they were able to identify them. The sequence of actions after identifying certain condition was participants' indication that nursing intern students observed the change in their patients' condition; therefore they intervened or looked for help.

In addition, patients in the intensive care unit were often unconscious due to a life threatening condition and required a continuous and close care. Assessment of the neurological status of patients admitted to the ICU was considered a base line for intervention, progression, and evaluation of the conditions' outcome. King Abdulaziz University Hospital followed the Glasgow Coma Scale (GCS) for neurological assessment, which included eye opening responses, verbal responses, and motor responses with grading point for a total number used to report it during the doctors' round.

Participants mentioned that nursing intern students expressed their assessment ability throughout their placement in the intensive care unit and showed their capabilities in figuring out their patients' diagnosis by following the hospital's assessment guide. Participants' statements in regards to the needed skill competencies theme proved this.

According to CACCN, all of the needed skill competencies were expressed by nursing intern students. However, all of those competencies were mentioned as part of the CACCN standard and not listed as competencies that intensive care unit nurses must perform. That finding

demonstrated how broad was the competency's concept in the context of Saudi Arabia regarding participants.

Developments of knowledge application competencies incorporated into data gathering and analysis, critical thinking, decision-making, and interdisciplinary relationship. Concepts of gathering and analyzing data were important to participants as they mentioned that as they worked as intensive care unit nurses, they used those competencies often. Participants expressed that collecting enough information about the case and analyzing them were needed in ICU nurses to implement their theoretical knowledge and use it to identify possible interventions and appropriate nursing care plans. The process of collecting data was through the patient if conscious and through their families if in a coma upon admission. Participants expressed that they also used the lab results, textbooks, electrocardiograms, and resource persons such as clinical instructors and head nurses to help them understand and analyze data on hand. After that, they mentioned interpreting and analyzing their data to help them manage and make informed decisions about patient needs and prioritizing the nursing care in life threatening and non-life threatening conditions. Participants did not mention if nursing intern students expressed data gathering and analysis competencies, which indicated a lack in the application of knowledge into practice. Data gathering was also linked to the familiarity about the technology used in the ICU, which helped nurses to manage their patients and report the progression of the case regularly. Consequently, nursing intern students need to be familiarized about those competencies to apply them during their intensive care unit placement at the KAUH. Data gathering and analysis can help nursing intern students to apply their theoretical back ground and test their knowledge to make and apply the suitable nursing care plans to their patients, which will be through integrating their knowledge with findings on hand and acting appropriately.

Most of development of knowledge application competencies, which previously mentioned were not met by nursing intern students except the interdisciplinary relationships, indicated a need for encouraging them to apply and express those competencies during their placement. Encouraging them will make their internship more productive and full of achievements toward accomplishing the CACCN standard, which will give them a solid guideline for the internship program if the related CACCN standard was applied.

5.2.4 Nursing in the Middle East

As for nursing care in the Middle East, there was an expectation of registered nurses to complete the majority of nursing actions (Shuriquie et al., 2008). However, the nursing staff of KAUH is all RNs; therefore the expectation of registered nurses was equal to all staff except team leaders, clinical instructor, and head nurse as they were expected to have higher level of intellectual efforts. They could act as resource persons, role models, and clinical educators for nursing intern students and their peers. Preceptors in King Abdulaziz University Hospital were uncertain about ongoing evidence-based research, which indicated a lack of promoting research or evidence-based practice among nurse staff. Some explained that their participation in my data collection was their way to encourage research at KAUH. Others mentioned their familiarity of statistical count of infection control department as their knowledge of ongoing research. Several preceptors mentioned a research class as a research promotion offered by the nursing education department at KAUH. Nurse educators explained their research promotion through the research course that King Abdulaziz University offered for BSN students and the Master's degree they started as they taught an advanced research course for master students. Evidence-based research and research promotion contributed in the outcomes of nursing care. Participants mentioned how

in-service lectures helped updating their knowledge. Making in-service lectures a requirement to nursing intern students during their ICU placement would update them regarding certain topics and make them familiar with special procedures. Promoting and encouraging research and evidence-based practice were mentioned as competencies in the CACCN standard of practice, which indicated corresponding competencies expected of nursing intern students.

In the Middle East also, students showed initial anxiety when they started their clinical practice and the need for clinical supervision (Sharif & Masoumi, 2005). Participants did not comment on nursing intern students having anxiety; however, they stressed the importance of clinical supervision and guidance during their intensive care unit placement to help them accomplish their requirements. As previously mentioned and corresponded with CACCN standard of practice, nursing intern students needed a resource person, role model, and clinical educator during their ICU placement to adopt, contribute, and support the quality of health care provided to the patient. In addition, a recommendation about the length of nursing intern students' clinical placement in the ICU was suggested, as it will help interested nursing intern students gain more inception about the expected competencies of the ICU.

5.3 Study Limitations and Strengths

One of the limitations of this study was the lack of literature regarding the context of Saudi Arabia. That was the reason behind choosing the topic from the context of Saudi Arabia to explore that area. As a qualitative study, another limitation was the inability to generalize the findings, as it would only suit the context of intensive care unit at the KAUH. Further limitations were related to the research participants and limitations of interpretive descriptive methodology. Including students as participants may have uncovered new themes that were not considered by

current research participants. Also, due to my lack of research experiences, I faced difficulty finding clear guidelines to conduct of the study using the interpretive description methodology.

Interviews were conducted using English language, which was used as second language by all study participants but is the language of the workplace. Using English as a second language may be a limitation due to the uncomfortable feeling that it may caused to participants, as they may not be able to fully express their opinions and answers. Many questions were repeated to participants and further explanations were asked from them due to the wording of the interview questions. Thus, using English as language of data collection may have been problematic but it was the only common language among participants and researcher.

This study explored the intensive care unit competencies of nursing intern students in Saudi Arabia, which aimed to present nurse educator and preceptor perspectives. A notable strength of this study was that it explored the area in a context that had not explored previously. Consequently, it was a significant contribution to enriching the nursing literature base especially in the context of Saudi Arabia and advancing the nursing intern students' internship outcomes. The research findings corresponded with many of the competencies mentioned in the Canadian Association of Critical Care Nurses standards of practice, which is perceived as study strength.

5.4 Recommendations

Based on the study findings, some recommendations are suggested.

1) Faculty should develop the internship program based on nursing intern students' preferences. Personal preference differences may need to be taking into consideration while developing the internship program or assigning nursing intern students. From the study results, it was clear that personal preferences affected the nursing intern students' performances. Nursing intern students who showed interest in the area of intensive care were more engaged during their placement. Therefore, developing the internship program based on nursing intern students' preferences was noteworthy and lengthening placement time in the preferred area.

2) Clinical educators could arrange Code Blue drills and other simulation experiences for nursing intern students. Based on the study findings, KAU lacked the equipped laboratory for simulation teaching and participants considered code blue drills at KAUH to be similar to what was explained to them as simulation lab. Therefore, making code blue drills as a mandatory practice for nursing intern students with complex and different scenarios may contribute to their confidence in handling real situations and include this participation in their evaluation form. Even though code blue drills may not present all possible ICU situations, but it would contribute to improving nursing intern students' performance. This recommendation may need an arrangement of nursing department to facilitate regular code blue drills especially for nursing intern students demonstrated by clinical instructors or nurse educators.

3) Collaboration between the university and hospital is needed. Even though study findings showed an agreement between nurse educators and preceptors, a lack of knowledge of

the educational program that KAU offered was evident among preceptors and some hospital settings were not evident to nurse educators. 3a) The findings indicated the need to offer orientation about the baccalaureate degree to preceptors. Also, 3b) those preceptors may be offered less acute patients to have the chance to explain, demonstrate, and help nursing intern students throughout their placement. Nursing intern students may provide their feedback regarding their preceptor, the clinical area, and their satisfaction about the ICU placement. 3c) Nurse educators may be encouraged to maintain their guidance and assistance to nursing intern students even though they were considered graduates and no longer linked with King Abdulaziz University.

4) Providing each nursing intern student with one preceptor throughout their ICU placement may increase nursing intern students' benefit of the intensive care unit placement. Preceptors will be familiar to what they taught and what was not yet learned. Also, nursing intern students will feel more comfortable asking questions to their preceptors as they feel more secure and confident.

5) If the unit does not have standards of practice, the intensive care unit may consider adopting a recognized standard of care or develop their own standards of practice. These standards must be implemented in practice. The competencies identified throughout this study corresponded with the CACCN standards of practice, which indicated a possible applicability of most listed competencies. Adopting this document to be a guideline to all nurses at the KAU who are interested to work in the intensive care unit is encouraged. Another reason behind adopting the Canadian Association of Critical Care Nurses standard of practice was the accreditation the

KAUH currently holds, which is Canadian Accreditation. All participants encouraged the adaptation of CACCN standard of practice.

6) Developing the curriculum to add topics such as patient safety and quality competencies. It was clear that nursing intern students lacked the knowledge about those areas. Including patient safety and quality competencies into the curriculum will benefit nursing intern students during their ICU placement as it would increase their awareness about what to do in regards to maintain patient's safety and increase the overall quality of their nursing care.

5.5 Future Research

Based on the literature search, this is the first study examining the nursing intern students' ICU competencies in the context of Saudi Arabia. According to the findings of this research, another qualitative study may be replicated in other settings. Based on these findings, a quantitative design may be implemented, including ICUs in different hospitals would be constructive. Now that certain insight has been added to ICU competencies of nursing intern students in the context of Saudi Arabia, further in-depth research to explore ICUs of different regions in Saudi Arabia, include nursing intern students' perceptions, and investigation following the application of these study findings. Further, more specific competencies could be explored qualitatively and/or quantitatively.

5.6 Conclusion

Intensive care unit competencies for nursing intern students is a lightly explored area based on the literature research done throughout this study, especially in the context of Saudi Arabia. Nurse educators and preceptors' viewpoints were explored as a baseline for new studies in the area. The purpose of this interpretive description was to describe the competencies needed by nursing intern students who choose to work in intensive care unit in Saudi Arabia as identified by their preceptors and nurse educators based on the interview guide that was developed from the Canadian Association of Critical Care Nurses standard of practice document. It was found that competencies such as communication, monitoring, observation, and assessment were needed competencies for nursing intern students. Development of knowledge application competencies including data gathering and analysis, critical thinking, decision-making, and interdisciplinary relationship were significant for nursing intern students who plan to work in intensive care unit after their internship year. Some strategies for quality improvement competencies were mentioned for nursing intern students to be familiar with during their placement period, which summarize many competencies that nursing intern students should learn from their internship. Several factors were suggested to positively impact nursing intern students' ICU placement including time period, orientation, practice focused ICU exposure, guidance and supervision, performance evaluation, and personality differences. It was also found that nursing intern students lacked the knowledge regarding ICU standards, simulation exposure, and knowledge of evidence-based research. With corresponded competencies with CACCN standard of practice, KAUH may adopt the document to develop a culturally fit standard of competency for nursing intern students and make it as a guideline for nursing staff as well.

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Appendix A

Participant's consent form

Project title: Intensive Care Unit Competencies of New Nursing Graduates in Saudi Arabia, Educator and Preceptor Perspectives

Researcher: Sarah Almazwaghi, Graduate Student, College of nursing, University of Saskatchewan, +1(306)341-3035, +(966)5461-76147, saa096@mail.usask.ca.

Supervisor: Dr. Linda Ferguson, Professor college of nursing University of Saskatchewan 107 Wiggins Road Saskatoon, Saskatchewan, Canada , + 1(306)966-6264, linda.ferguson@usask.ca.

Purpose of the Study: The purpose of this study is to describe the competencies needed by new nursing graduates who choose to work in intensive care units as identified by their preceptors and baccalaureate nurse educators.

Procedure: face to face interviews that will last for an hour between each participant and the main researcher. For staff nurses a room will be booked at a convenient location. For nurse educators the interview will take place in a convenient location that they agree on. Interviews will be audio-taped.

Funds by: The study is funded by the Ministry of Higher Education in Saudi Arabia through the Saudi Cultural Bureau in Ottawa.

Potential risks: None

Potential benefits: Explore the actual need in clinical setting to get better anticipation from new graduates. Add new research to the body of knowledge.

Confidentiality: Participants' identities shall remain anonymous and their data will be confidential. Code names will be used on all interviews transcripts. Consent forms will be stored separately from the data collected and the transcripts. Anonymity of participants will be maintained by code names on the transcripts and if the researcher plans to use their direct quotes.

There are many options to consider if you decide to take part in this research. You can select all, some or none of the following.

Please put a check mark on the corresponding line(s) that grants me your permission to:

I grant permission to be audio taped: Yes: ___ No: ___

Right to withdraw: participation is voluntary. Participants can answer questions that they are comfortable with answering, and participant can ask to have the tape turned off at anytime. Withdrawing from the research project at anytime is possible with no penalty on participants.

If you wish to withdraw, your data will be destroyed and will not be included in the research. However, if you withdraw after the dissemination of findings, it is not possible to remove your data from the analysis.

Follow up: study result will be distributed among participants from hospital and university.

Questions and concerns: please contact the researcher using the information at the top of the first page. This research has been approved on ethical ground by the University of Saskatchewan

Research Ethics Board on July 2012. If any participant has any questions regarding their rights in the project, they can address it to that committee through the Research Ethics Office ethics.office@usask.ca +1(306) 966-2975.

Signed consent: My signature below indicates that I have read and understand the description provided; I have had an opportunity to ask questions and my questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

_____ _____ Name of Participant Signature

_____ _____

Researcher's Signature Date

A copy of this consent will be left with you, and a copy will be taken by the researcher.

Appendix B

Interview guide

Demographic Information

1) What is your age?

2) What is your initial level of nursing education preparation?

1. Where did you take your education?

2. In what country(ies) do you hold nursing licensure?

3. Have you taken]additional nursing preparation beyond your initial preparation

4. Have you worked in other countries?

3) How much nursing experience do you have?

4) How much experience in intensive care nursing units do you have?

5) How much experience in this specific intensive care unit do you have?

General questions about nursing standards for intensive care nursing

6) Are you familiar with any nursing standards of practice that are related to the intensive care unit? Please elaborate.

7) When Saudi Arabia nursing interns finish their intensive care unit rotation in intensive care units, how prepared are they to work in intensive care units?

8) In terms of the nursing intern's length and nature of the internship program, is it sufficient to prepare new nurses to begin work in intensive care units?

9) According to the Canadian standards of critical care nursing practice (listed on the handout), there are seven general standards. ; Do these standards cover main aspects of nursing in this Saudi Arabia intensive care units? Do they fit the current nursing practice in this intensive care unit?

10) Provide your general feedback on the nursing interns regarding their general nursing skills such as observation, monitoring, communication, and assessing health status?

Specific Questions on the standards for nursing in intensive care units. Please answer these questions in terms of the competencies needed by new nurses who have finished their internship and wish to work in the intensive care unit.

1) Intensive care unit nurses use their developed skills and specialized knowledge to monitor, assess, and manage their patients continuously to promote optimal physiological balance.

What competencies do new nurses need in terms of this standard?

2) Intensive care unit nurses facilitate and promote optimal well-being and comfort in an environment of high technology that is probably unfamiliar to patients and families.

What are nursing competencies for new nurses under this statement?

3) Intensive care unit nurses encourage helpful partnerships with patients and their families based on trust, respect, communication and collaboration.

What competencies are needed by new nurses under this standard?

4) When intensive care unit nurses provide nursing care in a high risk environment, they achieve best practice initially and maintain it.

What competencies needed to achieve this standard by new nurses?

5) Intensive care unit nurses support and help patients and families when life sustaining measures are no longer an option through the transition from active treatment to a peaceful death

What competencies are needed by new nurses to meet this standard?

6) Intensive care unit nurse encourage collaborative practice between patient, family and health care provider is solicited, acknowledged and valued in a non-hierarchical manner. Given the fact

that nursing workforce in Saudi Arabia is promoting collaborative practice, what competencies of new nurses can help to facilitate that standard?

7) Intensive care unit nurses promote leadership by encouraging a critical care culture that leads to teamwork, improving quality, professional growth, safety, and responsible resource utilization What competencies do new nurses needed to meet this standard?

12. Based on the previous standards you identified:

a) What are the most observable competencies of nursing interns?

b) What is the current standard of competencies you following? Do students have access to those competencies?

c) What level of research skills for evidence-based practice do you expect in new nurses?

d) For nurse educators, how often do you expose students to simulation lab experiences?

11. Do you encourage applying the Canadian standards critical care of nursing practice in Saudi Arabia? How these standards could be used to support the professional development of new nurses (following their internships) who work in intensive care units. Please provide a rationale for your answer.

Appendix C

Fourth Edition

Standards for Critical Care Nursing Practice

Canadian Association of Critical Care Nurses

Standards for Critical Care Nursing Practice
Canadian Association of Critical Care Nurses

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Canadian Association of Critical Care Nurses

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Table of Contents

CACCN Standards for Critical Care Nursing Practice

The Canadian Standards for Critical Care Nursing Practice are designed to provide an essential resource to all nursing professionals including direct care practitioners, educators and administrators in their pursuit of best practice in the critical care environment.

Standards for critical care nursing are achievable expectations regarding critical care nursing practice. While these standards include expectations for critical care nursing practice in Canada, registered nurses are accountable to their provincial (regulatory body) standards for the practice of nursing. CACCN acknowledges that the capacity of an individual critical care nurse to meet the practice standards is dependent on several factors, including the presence of a supportive practice environment. CACCN is committed to developing collaborative initiatives that support and promote delivery of safe, compassionate, competent and ethical critical care nursing practice.

Philosophical Statement of Critical Care Nursing

Critical care nursing is a specialty which exists to care for patients who are experiencing life-threatening health crises within a patient/family centred model of care. Nursing the critically ill patient is continuous and intensive, aided by technology. Critical care nurses require advanced problem-solving abilities using specialized knowledge regarding the human response to critical illness.

The critical care nurse, works collaboratively within the interprofessional team, and is responsible for coordinating patient care using each member's unique talents and scope of practice to meet patient and family needs. Each patient has the right to receive care based on his/her personal preferences. The critically ill patient must be cared for with an appreciation of his or her wholeness, integrity, and relation to family and environment. Critical care nurses plan, coordinate and implement care with the health care team to meet the physical, psychosocial, cultural and spiritual needs of the patient and family. The critical care nurse must balance the need for the highly technological environment with the need for safety, privacy, dignity and comfort.

Critical care nurses are at the forefront of critical care science and technology. Lifelong learning and the spirit of enquiry are essential for the critical care nurse to enhance professional competencies and to advance nursing practice. The critical care nurse's ability to make sound clinical nursing judgments is based on a solid foundation of knowledge and experience.

The terms "nurse" and "critical care nurse" throughout the document refer specifically to registered nurses. The following are standards for critical care nursing in Canada.

Standard 1

Critical care nurses use advanced skills and specialized knowledge to continuously assess, monitor and manage patients for the promotion of optimal physiological balance.

Criteria:

The critical care nurse:

1.1 Gathers physiological, psychosocial, cultural, developmental and spiritual data based on the patient's condition using all available and appropriate resources.

1.2 Analyzes and validates data from multiple sources to inform decisions about patient/family needs.

1.3 Makes decisions about priorities of care in life-threatening and non life-threatening situations.

1.4 Integrates all findings from the assessment to identify a collaborative and/or an independent plan of care.

1.5 Coordinates and implements the plan of care within the individual's scope of practice.

1.6 Anticipates, prevents, prepares for, recognizes, and intervenes in life-threatening situations.

1.7 Manages multiple therapies in the context of ever-changing patient needs.

1.8 Monitors and evaluates the effectiveness of interventions within an appropriate time frame, revising therapies as necessary to achieve expected outcomes.

Standard 2

Critical care nurses promote and facilitate optimal comfort and well-being in a highly technological environment that is often unfamiliar to patients and families.

Criteria:

The critical care nurse:

2.1 Manages the environment to mitigate the effects of noxious stimuli.

2.2 Discerns among pain, anxiety and delirium as the source of discomfort and implements individualized therapies (pharmacological and non-pharmacological) to prevent and/or alleviate suffering.

2.3 Preserves the dignity of each individual by respecting his/her personal privacy and individual diversity including age, ethnicity, spiritual beliefs, gender, marital status, sexual orientation, lifestyle and socio-economic status.

2.4 Communicates information in a manner that maintains realistic hope and that is appropriate to the patient's/family's needs, stage of development and level of understanding.

Standard 3

Critical care nurses foster mutually beneficial partnerships with patients and families based on trust, dignity, respect, communication and collaboration. Family is defined by the patient.

Criteria:

The critical care nurse:

3.1 Gathers data concerning patient/families' needs and responses to the critical care experience and accesses appropriate resources to address identified concerns.

3.2 Shares information with patients/families in an open, accurate, honest manner to establish a plan of care and assist in decision-making.

3.3 Seeks out, listens to, and honours patient and family perspectives when planning and delivering care.

3.4 Advocates for patients and families to address their expectations and needs.

3.5 Provides family members with open access to the patient, respecting the need for privacy as the environment and situation allows.

Standard 4

When providing care in a high risk environment, critical care nurses participate in safety initiatives and adhere to best practice.

Criteria:

The critical care nurse:

4.1 Integrates data to anticipate, prevent, and recognize injury or dysfunction that may contribute to a life-threatening health crisis or long term alteration in health.

4.2 Documents patient care and its ongoing evaluation in a clear, concise, accurate and timely manner while respecting the privacy and confidentiality of health and personal information.

4.3 Seeks out and incorporates patient and family feedback into quality improvement activities.

4.4 Uses quality improvement findings to inform change for nursing practice and health care delivery.

4.5 Advocates for adequate numbers of knowledgeable and skilled critical care nursing staff to ensure safe and humane care for patients based on the complexity of care required.

Standard 5

When life sustaining technologies are no longer beneficial, critical care nurses support patients and families through the transition from active treatment to a peaceful death.

Criteria:

The critical care nurse:

5.1 Promotes the discussion of advanced care directives with the patient and/or the family.

5.2 Collaborates with the patient and family to identify available resources that will provide support during end of life care.

5.3 Identifies potential candidates for tissue and organ donation.

5.4 Accesses appropriate resources to guide ethically complex situations and foster effective coping strategies and possible resolutions.

5.5 Maintains ongoing communication with the family and health care team about the end of life plan of care.

Standard 6

The critical care nurse promotes collaborative practice in which the contribution of the patient, family and each health care provider is solicited, acknowledged and valued in a non-hierarchical manner.

Criteria:

The critical care nurse:

6.1 Explains and promotes his/her roles and responsibilities to patients, families and other health care providers.

6.2 Demonstrates effective interpersonal communication, negotiation and conflict resolution skills to promote positive collegial relationships.

6.3 Accepts accountability for his/her autonomous professional contributions and collaborates to determine the best care provider based on respect for the unique roles, responsibilities and shared competencies.

6.4 Emphasizes the value of shared responsibility in decision making and supports the use of shared leadership and coordinating roles.

6.5 Consults with appropriate individuals to establish/review the plan of care and promote continuity of care.

Standard 7

Critical care nurses provide leadership by fostering a critical care culture conducive to collaboration, quality improvement, safety, professional growth and responsible resource utilization.

Criteria:

The critical care nurse:

7.1 Incorporates professional, legal, ethical and critical care standards into practice.

7.2 Maintains critical care and professional competency by engaging in reflective practice, by self-assessment of learning needs, and by participating in educational activities.

7.3 Promotes research, evidence informed practice and dissemination of nursing knowledge.

7.4 Acts as a resource person, educator, role model, advocate and/or mentor for students, peers and health care providers.

7.5 Contributes to and supports initiatives that enhance the critical care environment and the quality of work life.

Standards for Critical Care Nursing Practice
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